Inaugural Address
ON
THE ETIOLOGY OF BERI-BERI.

[Delivered before the Epidemiological Society of London on Nov. 15th, 1901,

BY PATRICK MANSON, C.M.G., F.R.S., M.D., LL.D. ABERD., F.R.C.P. LOND.,
PRESIDENT OF THE SOCIETY.

GENTLEMEN,—The last two or three decades have been signalised by many important discoveries in the etiology of disease—of tropical diseases no less than of the more familiar diseases of temperate climates. In the group of tropical diseases we may confidently tick off as having had their exact causes finally determined malaria, Mediterranean fever, plague, leprosy, filariasis, ankylostomiasis, endemic hæmaturia, endemic hæmoptysis, mycetoma, and some minor complaints. Quite recently, thanks to the insight of some of our American *confrères*, we are almost justified in adding yellow fever to the list, although it is true that the actual germ of this disease has not yet been definitely isolated. The immense practical gains which have already sprung, or which will ultimately spring, from these discoveries are patent to everyone. Their scientific importance is in many instances of the first magnitude. These considerations, utilitarian and scientific, should stimulate to further effort towards attempting the solution of the many etiological puzzles which, more especially in tropical diseases, still remain unsolved.

Among other tropical diseases the various affections whose leading symptom is intestinal flux and which are included under the somewhat elastic names of "dysentery," "sprue," "chronic diarrhœa," "colitis," "entero-colitis," &c., are perhaps the more important of the unsolved etiological problems. Although intestinal flux is one of the commonest symptoms in disease, especially in tropical disease, strange to say the causes of the pathological processes which lead to the symptom are, if we except cholera, absolutely unknown or, at all events, undetermined. Perhaps only second in importance and in mystery to the intestinal fluxes are those tropical affections which have in common as their leading pathological feature multiple peripheral neuritis. It is about the etiology of one of these—namely, beri-beri—that I propose to offer a few observations this evening.

Of the importance of beri-beri it is hardly necessary to speak. Everyone familiar with the literature dealing with the diseases of the East is aware of the almost leading place which, in certain localities and seasons, beri-beri assumes in their pathology. Instances in illustration of this can readily be adduced from Japan, the Philippines, China, Tonkin, the Netherlands Indies, Burma, the coast of India, tropical Africa, the Brazils, the West Indies, the Sandwich Islands, and even Australia. Among British possessions nowhere is the disease more common than in the flourishing Straits Settlements and in the neighbouring, and intimately associated, Federated Malay States. Here it is always in evidence. A large proportion of the beds in the State and other hospitals are occupied by the victims of beri-beri. Thus, in the State of Negri Sembilan Dr. Braddon reports that in the year 1899 out of every 1000 deaths of Chinese immigrants 62 were attributed to beri-beri. Of every 1000 deaths of the native Malays 140, and every 1000 deaths among Tamils 150, were caused by this disease. So that about one-tenth part of the entire mortality of that State was attributable to beri-beri. During the nine years 1890–1899, in a mean population of 80,228 6001 cases of beri-beri were treated in the hospitals; of these, 535, or 9·2 per cent., died. In the year to which I refer (1899), according to Dr. McClosky, in Pahang in a population of 73,000 there were 146 deaths from beri-beri. On the assumption that the case-mortality in Pahang was similar to that of Negri Sembilan this would represent a total of 1460 cases, or about 2 per cent. of the entire population. In Perak, also in 1899, according to Dr. Wright, in an estimated population of 294,297 there were treated in the hospitals 3113 cases of beri-beri, with a mortality of 333. In the same year 1793 cases were treated in the hospitals of the Straits Settlements with a death-rate a little over 32 per cent.—a death-rate, be it remarked, much greater than that occurring in the Malay States, a circumstance attributable in some measure probably to the fact that only the graver cases were admitted.

It would be easy to bring together similar statistics from other countries. The figures I give have been selected because they are recent, apply to British territories, and have been collected by responsible medical officers. They show quite conclusively that in some parts at least of our Empire beri-beri is a very important element in the State problems which the Government has to tackle. Directly or indirectly it is a serious tax on these communities and a distinct drag on their progress. Not only does it lead to great loss of life but it is an enormous drain on the labour market and on industrial resources, for beri-beri is a disease which when not quickly fatal usually runs a long course—probably of several months—during which the patient is, as a rule, incapable of earning his living and, in many instances, of even cooking his food or in other ways attending to his personal requirements. It hampers every industry. It breaks out constantly on plantations, in mines, schools, gaols, and hospitals, and it is a source of continual anxiety to the capitalist, the employer of labour, the Government official, and the medical man. To be able to place one's finger with precision on the cause, or on the medium or way in which it is conveyed, would probably be to enable us to stop this disease and so confer an incalculable boon on the countries I have enumerated. The etiology of beri-beri, therefore, is well worth the serious consideration of the sanitarian as well as of the epidemiologist. As the subject is to occupy the attention of the commission which, as suggested in my address last year, should be sent out to study the diseases of the South Pacific (a commission which, I am pleased to be able to inform you, has already set out) I have thought that the present would be an appropriate opportunity to pass in review some of the facts which have been accumulated and the theories which have been formulated in connexion with the subject.

An additional consideration which has influenced me in selecting the etiology of beri-beri as the subject for my address, and one which should urge us to fresh effort at solving the mystery of this disease, lies in the circumstance that there is a considerable body of evidence tending to show that beri-beri has spread into regions hitherto believed to be immune and even into Europe and other temperate climes. As a matter of fact, beri-beri is constantly to be found in the shipping in the London Docks, and doubtless, if carefully sought for, it could be found in all the large shipping ports, not only in Britain, but on the continent and North America. Moreover, beri-beri, or a disease closely resembling it, if not actually identical, has shown itself in more than one institution in this country—in the Richmond Asylum, for example. A similar affection has shown itself elsewhere in Europe—in France and Italy, for example—and also in the United States of America. It is quite possible, therefore, that in time an epidemic disease resembling beri-beri, if it be not true beri-beri, may attain a permanent lodgment in temperate climates and thus add another burden to countries already sufficiently afflicted with their own indigenous diseases. In these days of rapid and increased communication all kinds of diseases tend to become diffused.

The study of tropical disease as compared to the study of the diseases of Europe labours under this disadvantage, that whereas in the latter there is in most instances complete agreement amongst pathologists as to the pathological conditions indicated by certain names, in the case of tropical diseases, owing to the physical difficulties imposed by distance and consequent rarity of opportunity for the comparison and identification of the diseases of places which may be thousands of miles apart, much confusion has crept in the nomenclature. In some places a disease receives a name which in other places is applied to a totally different condition. Thus, as regards the disease I am discussing, the term "beri-beri" was applied in Assam and Ceylon to what turns out to be ankylostomiasis, a condition widely different from the peripheral neuritis which the term "beri-beri" indicates in Brazil, Japan, the Netherlands Indies, and elsewhere. Furthermore, it is just possible that the term "beri-beri" includes more than one species of peripheral neuritis. It has even been suggested that what is known as "beri-beri" is in many cases, if not in all, a metallic neuritis produced by arsenic or other mineral. In the tropics as in temperate climates, there are undoubtedly several distinct kinds of the pathological condition passing under the name

of "multiple peripheral neuritis." For example, I have seen cases of this condition from the West Coast of Africa which, although bearing a close resemblance to beri-beri, were probably of an entirely different nature At all events, the cases I refer to did not exhibit the cardiac and dropsical symptoms usually present in true tropical beri-beri. I might remark in passing that there is a large and almost unworked field waiting for the bacteriologist in the tropics; for example, the type of neuritis I refer to, as well as that singular condition so common in Europeans in West Africa and known as "West Coast memory." One well-marked type of peripheral neuritis has been very carefully described by Dr. Strachan. In many respects it, too, resembles beri-beri. Dr. Strachan describes a typical case thus: "A patient presents himself complaining of numbness and cramp in his hands and feet, dimness of sight, and a tightness round the waist." This is always the remark first made by the applicant for treatment. If the case be somewhat more advanced he may add to this statement that he fears he is "getting hard of hearing," and he goes on to say that he suffers from severe burning in the palms of the hands and soles of the feet and that very often this is worse at night than in the day and that the pains and the burning heat prevent his resting. It is rarely that he gives more information than this. On examination it will be seen that there is slight excoriation with fine branny desquamation of the edges of the eyelids, margins of the lips, and around the margins of the nostrils. The palpebral conjunctiva may be hyperæmic as well as the lips. The heat in the hands complained of by the patient will be found to be not merely subjective but appreciable to the touch and due to a hyperæmic condition of the palms. The acuteness of vision for form will be found to be more or less impaired, according to the stage to which the malady has progressed. Examination of the main nerves to the extremities will show that they are very tender on pressure, especially the ulnar nerve, and along the distribution of their terminal filaments they may be tracked by fine herpetic vesicles. On admitting such a case to hospital and watching its further progress it will be noted that at night the patient will be awake for hours, rubbing his feet and legs most probably and moaning with pain. The loss of vision will proceed until he can with difficulty distinguish a large object immediately in front of him and cannot recognise individuals. The muscles of his limbs will waste until the claw hand and foot are marked features, and this wasting of muscles and disappearance of fat will produce an emaciation which is very noteworthy in advanced cases. There will be found to be no alteration of the pupil to light and accommodation, no falling when the eyes are closed, and the sphincters will not be affected. Should the disease make further headway the patient may become a mere helpless skeleton unable even to feed himself, his breathing laboured from implication of trunk muscles in the general muscular atrophy, almost blind and with, perhaps, an ulcer on the cornea, quite deaf, and with possibly small bullæ on the extremities. There may also occur during the course of the malady monoplegiæ, as facial palsy, or some of the external muscles of the eyeball and, but rarely, of some group of muscles in an extremity. The temperature chart will show a subnormal condition in the mornings, with an evening rise of from one to two degrees. A fatal termination is fortunately rare; when it occurs it is due to the dyspnœa and the riotous action of the heart resulting from vitally important nerves becoming involved in the now almost universal nerve changes. As a rule, however, under appropriate treatment, recovery gradually with perhaps from time to time slight recurrences of the nerve inflammation takes place. The patient becomes stronger, can help himself a little, assimilates food well, and puts on fat again. Then he is able to walk a little, first with help and afterwards alone, his grasp, measured with the dynamometer, shows daily increase of muscular power, his sight clears up, and his deafness gradually passes away, though if this has been extreme it is usually one of the last symptoms to disappear. This disease attacks hundreds of negroes in Jamaica at all ages and of both sexes. It prevails most on the sea-coast and in low-lying regions. Dr. Strachan is inclined to attribute the affection to malaria, but he does not pledge himself to this opinion and I think wisely, for were this a malarial neuritis a similar disease ought to be found in other malarial countries. In many respects Strachan's disease resembles arsenical neuritis and is well worth further investigation in the light of the recent experiences in Birmingham and the North of England. Another curious neurosis, also probably a peripheral neuritis, was noticed by Malcolmson and other writers on East Indian disease in the earlier part of the last century. I refer to what is known as "burning feet." This name adequately describes the leading symptom of the disease, for such undoubtedly it is. It was, and probably still is, very common in parts of India. It occurs in China to my knowledge.

It is evident, therefore, in investigating and discussing the etiology of beri-beri, if confusion is to be avoided that a clear conception of what is meant by this term should be arrived at. What I conceive to be understood by the word "beri-beri" is a form of multiple peripheral neuritis which occurs endemically and epidemically and is specially characterised as compared with other forms of peripheral neuritis by proneness to œdema and to implication of the neuro-muscular system of the central organ of circulation; by complete absence of trophic skin lesions, of paresis of the muscles of the head and neck, of marked implication of the organs of sight, hearing, taste, and smell, and of the mental faculties. In common with alcoholic and arsenical neuritis there are troubles of locomotion, paræsthesiæ of various descriptions, especially in the lower extremities, marked hyperæsthesia of the muscles involved, with subsequent atrophy and generally, after the initial stages, complete absence of patellar tendon reflex, the superficial reflexes, and the action of the sphincters being in the vast majority preserved. The patient complains principally of sweatings, palpitations, and breathlessness, weakness and numbness of the extremities, and swelling of the legs. Although at the commencement of the disease, and at the outset of such exacerbations as may occur during its progress, there may be slight elevations of temperature and gastro-intestinal disturbances, fever and diarrhœa are far from being prominent features in the progress of the complaint. The intensity and duration of the disease varies within wide limits. It may be of the most trifling description and only of a week or two's duration; or it may prove rapidly fatal; or it may persist in varying degrees of intensity for months. The leading feature may be paresis and muscular atrophy or it may be extreme anasarca, or it may be serous effusion into the pericardium or the pleuræ, or it may be œdema of the lungs, or it may be rapidly fatal paralyses of the right heart or of the diaphragm and muscles of respiration. It occurs generally in limited epidemics in particular houses, institutions, plantations, mines, &c., or it may spread over a large area, but only attacking limited foci therein. It occurs at sea on board ship, where it is prone to be extremely fatal. The post-mortem lesions are those ordinarily found in multiple peripheral neuritis—usually degeneration of peripheral nerves and, as Dr. Wright has recently shown, an ascending degeneration of the neuron ultimately involving the corresponding intracranial cells. It may prove fatal very rapidly in a day or two from the declaration of the symptoms, or at any time during its progress. One attack confers no protection against a second. The case-mortality ranges from 5 per cent. to 50 per cent. In some epidemics only a small proportion of the affected community is attacked; in other epidemics almost everyone may be victimised. In some plantations over 75 per cent. of the coolies have been killed off by beri-beri in a single year.

What is the cause of this disease? Innumerable speculations have been advanced. So far none of these has been proved to be correct. I shall pass over the theories of the earlier writers on the subject and confine myself to what may be regarded as the not disproven theories of more modern workers. These may be grouped under two headings: (1) the dietetic theory; and (2) the microbic theory.

The dietetic theory has been advocated by many writers, especially by Miura who attributed beri-beri to the use of fish, but with more reason by Vinson, Le Roy de Méricourt, Rochard, Overbeck de Meyer, Masé, and especially by Takaki. All of these attribute the disease to a prolonged and uniform rice diet. Takaki, in particular, took this view, believing the disease to be caused by the physiological deficiency of nitrogen in an almost exclusively rice diet which at one time prevailed in the beri-beri-stricken Japanese navy. He therefore urged on the Japanese authorities the adoption of a more nitrogenous dietary for their sailors, with the result that whereas before the adoption of the more liberal dietary 32·45 per cent. of the force were annually attacked with beri-beri, after the

adoption of the new dietary in 1884 the incidence of the disease rapidly fell to zero. In 1898 it stood in a force of 18,426 men at 0·08 per cent. only. So remarkable a result as this could not fail to call for the application of the principle involved to the army, to prisoners, and to similar public bodies and, as stated in the *Sei-i-Kwai Medical Journal* by Baron Saneyoshi, F.R.C.S. Eng., with equally happy results. Moreover, it has been observed that wherever throughout the Japanese Empire, from one circumstance or another, the diet of the people has been exclusively or mainly a rice one, beri-beri has appeared, to disappear again when this assumed dietetic error has been corrected. This remarkable experience certainly tends to support Takaki's views; but if we consider the circumstances of certain epidemics elsewhere it becomes manifest that there is something more than, or rather other than, nitrogen starvation at the root of beri-beri—that very probably nitrogen starvation has nothing to do with it whatever. Takaki's theory may have led to a successful practice, but success in practice does not necessarily prove the correctness of the theory on which the practice is founded. If the nitrogen starvation theory be correct, how comes it that beri-beri not infrequently attacks the well-to-do—that it appears in hospitals and jails where the food is of good quality, physiological in the proportion of its elements, and sufficient in amount? For example, in the Tan-tok-seng Hospital, Singapore, the diet is a liberal one; nevertheless, patients admitted for some trifling disease, such as an ulcer of the leg, after a time may contract, and die from, beri-beri. How comes it that the disease appears in jails, plantations, and mines, the dietaries of which have been specially devised with a view to avoiding deficiency in the nitrogenous elements? Many examples of this could be brought forward. In 1894 a number of Japanese were imported into Fiji to work on sugar estates; they were picked coolies and in good health when they left Japan and during the journey. On their arrival at Fiji they were divided into two bands. One, consisting of 50 coolies, was sent to work on a certain estate. The dietary was liberal, including meat or fresh fish to the amount of half a pound per diem, besides two pounds of rice and a variety of condiments. Nevertheless, within two months of the arrival of the coolies on the island beri-beri broke out and in all 42 cases occurred. Eight of these patients died; 34 were returned to Japan suffering from the disease, the remaining eight healthy coolies accompanying them. The other batch of immigrants, 205 in number, were sent to a sugar estate in another part of the island. They had a similar dietary. Within a month beri-beri broke out among them. The cases steadily increased in number and by the end of six months 226 out of the 250 were affected. 69 died; the survivors, 181 in number, many still affected with beri-beri, were sent back to Japan. In Singapore jail in 1898 and 1899 there were two kinds of diet in use—ordinary and penal. The ordinary diet was a sufficiently liberal one, including fresh meat and wheaten flour. The penal diet contained no meat. Nevertheless, the greater number—absolute and proportionate—of cases of beri-beri occurred among those on ordinary diet, that is, on the diet richest in nitrogen.

Macleod[1] relates an interesting epidemic or board ship in which beri-beri attacked the captain and officers and not the crew—an unusual occurrence. The dietary of these officers included such luxuries as haddies, clams, oysters, lobster, and salmon. Here there could have been no nitrogen-starvation. The disease elected to attack the better-fed members of the ship's company. There was no nitrogen-starvation among the inmates of the Richmond Asylum before or during the epidemics of beri-beri there, which have been so fully and carefully described by Mr. Conolly Norman. There was no nitrogen-starvation in the Blind Asylum at Rio de Janeiro, where not only the inmates but the director and his family were attacked.

There are many additional instances on record which might be quoted in which Europeans enjoying a liberal diet have fallen victims to beri-beri, and although it must be admitted that remarkable improvement has sometimes supervened on the introduction of a more liberal dietary in beri-beri-smitten jails and similar institutions, yet even in those same places and while the inmates were still enjoying the improved dietary which at one time seemed to be beneficial, the disease, after a year or more, reappeared. This has been the experience in Singapore jail where the disease reappeared in 1898 after having been absent for 14 years.

If the cause of beri-beri be deficient nitrogen in food we ought always to find this condition preceding or accompanying its epidemic development and where we get nitrogen starvation we ought always to get beri-beri. How far the first is from being the case the instances I have quoted show; how far the second is from being the case hundreds of experiments, if unintentional, daily prove, for surely nitrogen starvation is common enough the world over, but beri-beri has no such universal distribution. Dr. C. Eijkman of Batavia has recently brought out a curious fact in relation to rice diet in beri-beri. The prisoners in Java are fed amongst other things on three qualities of rice—one, decorticated rice in which the pericarp has been entirely removed, or at least in from 75 per cent. and upwards of the grains, by milling; a second kind in which the pericarp is retained entirely, or at least in 75 per cent. of the grains; and a third kind consisting of a mixture of the first and second. Statistics applying to 280,000 prisoners show that beri-beri attacks 2·84 per cent., or one in 39, of the prisoners who are supplied with the first or decorticated rice, whilst it attacks only 0·01 per cent., or one in 10,000, of the prisoners who consume non-decorticated rice, while those fed on the mixture of these two qualities suffer in an intermediate degree—namely, 0·24 per cent., or one in 416. He further states that fowls fed exclusively on decorticated rice are affected with a peculiar paretic disease resembling beri-beri, whereas fowls fed on non-decorticated rice are not so affected. The source and species of rice, Dr. Eijkman says, make no difference in the result. Other observers in the Malay islands have made somewhat similar observations on the influence of the quality of the rice. The Japanese substitute barley or beans for rice as a preventive of beri-beri, and believe in their efficacy. A grave outbreak of beri-beri in the pearling fleet off the north coast of Australia was arrested, it is said, by the timely substitution of wheaten flour for the damaged rice on which the crews were feeding. These are facts to be noted, but not necessarily interpreted as proofs that beri-beri is a rice-caused disease, much less a nitrogen-starvation disease.

The germ theory of beri-beri.—Another theory, and one much more plausible than the foregoing, is to the effect that beri-beri is a germ disease. Such a theory is quite compatible with the remarkable Japanese experiences to which I have already alluded, as well as with all the known facts. But as to whether the germ produces its morbid effects while proliferating in the human body, or as to whether it acts indirectly by producing outside the body a toxin which on being ingested, inspired, or otherwise absorbed, acts on the nerves, it is impossible as yet to say. There are arguments in favour of both hypotheses.

The fundamental nerve lesions in beri-beri resemble those produced by several well-known organic poisons and are probably the result of the direct action of some such poison. If we adopt the first hypothesis—that is, the infection hypothesis—we have the argument supplied by analogy for supposing that the lesions are the effect of a toxin elaborated by the germ while it is proliferating in the blood or tissue—that is to say, an intoxication produced by one infection; if, on the other hand, we adopt the second hypothesis we must conclude that the specific germ resides in some external medium where it elaborates its toxin which is subsequently absorbed as such—the germ not entering the body or at all events not necessarily so.

The infection theory has had many advocates, including Scheube, Lacerda, Ogata, Masanori, Wallace, Taylor, Cornelissen, Suguenoya, Pekelhäring and Winkler, van Eecke, Rebourgeon, Musso and Morelli, Glogner, Braddon, Hunter, Rost, and I do not know how many more. Many of these claim to have discovered a beri-beri bacterium. Unfortunately, in some instances the observations are crude and open to objection on the ground of technique; more unfortunate than this, there is a suggestive want of uniformity as to the morphological and cultural characters of the various organisms separated, some describing a bacillus, others a micrococcus, and one at least an endo-corpuscular protozoon like that of malaria. There is also a suspicious unanimity as to the pathological effects produced by those very different organisms when injected into the lower animals. Some recent work by Hunter in Glasgow, carried on under very favourable circumstances, led him to the conclusion that beri-beri is caused by a micrococcus which is visible in the blood and which can be cultivated in various

[1] Brit. Med. Jour., August 14th, 1897.

media and on subsequent injection into rabbits gives rise to something like a peripheral neuritis. His observations, like those of van Eecke and Braddon, seem to confirm those of Pekelhäring and Winkler. On the other hand, equally careful observations, made in equally favourable circumstances by more than one bacteriologist working with material supplied by the Richmond Asylum epidemic, gave absolutely negative results, and the same may be said of similar observations elsewhere. If beri-beri be an infection I hold with Scheube, than whom there is no higher authority on this disease, that so far the germ has not been discovered or, at all events, that no germ has been demonstrated to be the specific cause of the disease.

To my mind the theory which conforms best to all the known facts in respect to the etiology and pathology of beri-beri is to the effect that this disease is purely an intoxication produced by a toxin elaborated by a germ whose nidus is located outside the human body; that in this respect beri-beri is on all fours with alcoholism, the germ of which is the yeast plant, the nidus solutions of sugar, the toxin alcohol, and, to complete the parallel, the pathological effect a peripheral neuritis. There is no evidence to show conclusively that beri-beri can pass directly from man to man like the ordinary infectious disease, yet that it is produced by a living germ is certain. This is proved by the fact (*a*) that the cause can be transported from place to place and, therefore, cannot be of a climatic or meteorological nature; and (*b*) that when so transported it can multiply and spread and, therefore, cannot be of an inorganic nature. As already mentioned it has recently been suggested that beri-beri is caused by arsenic. Now the clinical symptoms of beri-beri and arsenical poisoning are very different. I have never seen skin lesion, other than accidental, in beri-beri. This in itself is almost conclusive. The diseases are not the same clinically. Professor Dixon Mann has recently shown that in arsenical neuritis arsenic can by chemical tests be detected in the hair. Some time ago he had the kindness to examine for me hair from two recent cases of beri-beri. In neither did he find a trace of the mineral. There is no evidence worth considering that tends to show that any other mineral is concerned in the production of the disease. Tin has been suggested; but there is no tin in Japan or in the Kurile Islands where beri-beri has occurred. A mineral cause would not be regulated in its incidence or efforts by meteorological conditions, as beri-beri certainly is.

That the cause of beri-beri can be transported has been proved over and over again, as, for example, by the epidemic among Japanese in Fiji already alluded to; but it is more difficult to find facts to establish completely that when so transported it can multiply. If, however, we find an instance of some island hitherto free from the disease, among the natives of which beri-beri on being introduced has spread, we may regard it as presumptive proof that the cause of beri-beri is endowed with that special property of living things, the power to multiply. There is recorded at least one apparent example of such an occurrence. A number of Tonkinese and Annamese were brought to New Caledonia in March, 1891. Beri-beri broke out among them and caused many deaths. After a time the disease spread, and in some instances proved fatal to certain natives, Kanakas, who had become associated with the Asiatics. These two things, portability and the power of multiplication, if established, certainly show that the fundamental cause of beri-beri is a living thing, a germ. The evidence that the multiplication of this hypothetical germ occurs outside the body, though not conclusive, is certainly stronger than any evidence which has been hitherto advanced in favour of its multiplication inside the human body. Did the germ multiply inside the human body we might expect that the disease it produces would run a more or less definite course as in other infections. But this is not so, for if we remove the subject of beri-beri from the infected area or the conditions in which he has sickened after an interval of from a week to a fortnight the progress of the disease, if it had not proved fatal in the interval, will be arrested and slow convalescence supervene. Now, if beri-beri be caused by a germ living in the human tissues it is not likely that this germ would be killed off thus early; on the contrary, analogy would lead us to believe that it would continue to multiply till immunity had been produced, and this we know to be a long process in beri-beri, for those patients whose lives are spared and who continue to live in the endemic area generally exhibit active symptoms for months after the commencement of the disease.

In our experience of the disease at the Seamen's Hospital, Albert Docks, we have very strong evidence of this evanescent nature of the primary effects of the toxin of beri-beri. From October, 1890, to November, 1901, 135 cases of beri-beri were admitted to this hospital. They all came direct from the ships in which they acquired the disease. 19 died—four on the first, two on the third, four on the fifth, two on the sixth, one on the eighth, and three on the fourteenth day after admission. This accounts for 17 of the 19 deaths. Of the two other fatal cases, one died from phthisis on the hundred-and-fourth day after admission; the other, apparently from dilated heart, on the thirty-first day. With the exception of these two, neither of whom apparently succumbed to the immediate effects of disease, a fatal result never occurred later than a fortnight after the patient had been removed from the conditions in which he had contracted the disease. At the Seamen's Hospital, therefore, we have come to regard cases of beri-beri as safe when they have passed the fourteenth day. Would this be justifiable were the disease the result of an infection, immunity from which is only slowly acquired? Sufferers from beri-beri when kept under beri-beri influences do not recover for months, during which the disease is liable to exacerbations in any of which death may occur. Beri-beri is like alcoholism in these respects—keep the drunkard from liquor and in a few days he begins to recover; give him liquor and he will not recover. Take the sufferer from beri-beri away from the circumstances under which he is being poisoned and in a few days he begins to mend; keep him under these circumstances and he will continue sick and very likely die.

Pekelhäring and Winkler, who advocate the personal-infection theory, try to get over the generally recognised beneficial influence of removal from the endemic area by assuming that in this area the disease is kept up by continual or repeated infections, and in their experiments they attempted to imitate what they assumed occurs in nature by introducing syringefuls of their cultures at short intervals into the experimental rabbits. Their followers have done the same. It is small wonder that they had fatal results and indications of peripheral neuritis; it is a wonder rather that any of their animals survived such treatment. Hirota publishes an interesting observation which lends strong support to the toxin theory. In some respects it resembles our experience at the Albert Dock Hospital. Infants suckled by mothers suffering from beri-beri get the disease. He refers to 52 such cases. When the infants were weaned and fed on condensed or cow's milk improvement set in at once; five cases which were not so treated died. A child who acquires a germ disease from its mother's milk will not recover thus rapidly; but a child who has only become intoxicated from drinking an intoxicated mother's milk will.

But although we may conclude, with a fair show of reason, that beri-beri is a toxin-produced disease we cannot say what the toxin is, what the germ producing it is, or where this germ resides. The whole epidemiology of the disease shows that the germ clings to people—witness its transportation to Fiji and New Caledonia by Asiatics—and that it clings to places—witness the persistency of the disease in certain buildings and ships. Instances of its tendency to cling to buildings are numerous and there are some well-authenticated examples of a similar persistency in ships. A very telling example of the latter is recorded by Mr. Montgomery Smith.[1] In 1896 a ship, the *Lodestar* of London, arrived in Falmouth with a cargo of rice from Rangoon after a long voyage during which the entire crew was attacked with beri-beri and three had died from the disease. The ship was sold to German owners and renamed the *Steinbek*. At Amsterdam she received a new crew and took in fresh provisions; she then sailed for Java where she loaded with sugar. She left Java on Jan. 27th, 1898, all being well on board. On April 29th, when off St. Helena, and after being three months at sea, beri-beri broke out, and when the ship arrived at Bermuda the entire crew, with the exception of one man and a boy, were down with the disease. One man died in Bermuda, the others apparently recovered. Two epidemics of beri-beri in the same ship, but in different crews and on different provisions, occurring at an interval of about two years, surely form no mere coincidence but distinctly point to a persistent infection in the ship. A Chinese revenue cruiser well found in every respect visited Corea. Many of the crew subsequently developed beri-beri. For several years thereafter during the south-west monsoon cases

[1] Brit. Med. Jour., Nov. 5th, 1898.

of the disease kept cropping up in the crew. This example of ship infection came under my own cognisance and I was familiar with the facts.

At the Albert Dock Hospital, as recorded by Dr. Rees, we came at one time to regard certain steamers trading to the port of London as infected ships; we called them "beri-beri ships," as they almost invariably brought us cases of the disease on their return from their periodical voyages to the East.

Many similar facts could be adduced tending to show, although not absolutely to prove, that a ship can become infected with beri-beri. If a ship can become infected why not the houses, and even the localities, in which this disease, as is its habit, establishes itself? Granted that a place or ship can become infected we have still to find the particular medium in which the germ operates and the particular portal through which its toxin enters the human body. There is a marked tendency among the students of this subject to regard, not without reason, rice as the nidus of the germ; but if rice be the medium how is it that the disease sometimes occurs in individuals who have not consumed this cereal? The answer may be that other farinaceous substances are equally efficacious as a culture medium, if I may so speak. But if we concede this how are we to explain the latency of the infection in buildings and ships which have had their stores frequently renewed in the intervals between the epidemics? The answer to this may be that the germ clings to the walls, the wood, and the utensils of the place, and that when cereals are brought in the germ drops into them and infects them. Thus infected, when consumed, whether on the premises or exported elsewhere, they may cause the disease. On the other hand, it may be that the germ distils its toxin from some other medium, clothes, the soil, wood, or what not, and so poison through the atmosphere. This is speculation—but I think we have distinct evidence to show that beri-beri is, in a sense, a place disease.

In the foregoing reasonings, or, if you like, speculations, on the nature or cause of beri-beri I have been powerfully influenced by the analogy of alcoholism. Analogy I know is not argument, but if it helps us to understand or if it helps us to suggest it is not quite useless. Before, however, anything like assurance on the etiology of beri-beri can be attained we want more facts, above all carefully devised and executed experiments. It is to be hoped that the expedition to which I have alluded will, in the specially favourable circumstances in which it will be placed, carry out a series of such experiments with the view to ascertain, first, the medium or media in or through which the disease is conveyed; and, secondly, having found this, by a process of exclusion to isolate the organism which undoubtedly is at the root of the disease. Should they succeed in this it is more than probable that we will be in possession of that knowledge which alone can give precision and accuracy to efforts at cure and prevention.

There are several points that investigators into the etiology of beri-beri must be careful to attend to.

1. The diagnosis; they must avoid mistaking other forms of peripheral neuritis for that of beri-beri.

2. They must bear in mind the possibility that the disease may not have been contracted at the place in which it is declared.

3. That the toxin which produces an outbreak of beri-beri may have been imported as such and not manufactured, so to speak, locally.

4. They must carefully differentiate between predisposing or favouring conditions, such as overcrowding, heat, and moisture, bad food, &c., and the actual direct cause.

5. Finally, they must recognise that the actual cause must correspond in its geographical distribution with the geographical distribution of the disease.

RESPONSIBILITY OF HOUSE-OWNERS.—At the Stonehouse County Court held on Nov. 11th a Devonport clergyman claimed £30 damages from the owner of a house at Ivybridge. The plaintiff rented the defendant's house for the summer, being assured that it was in a good sanitary state, but shortly after the house was occupied the plaintiff, his family, and servants suffered from illness which medical evidence showed was caused by sewer-air poisoning, and a builder proved that the sanitary fittings were defective. The hearing of the case occupied nearly five hours and his honour, Judge Woodfall, eventually gave judgment for the plaintiff for £25 and costs.

The Harveian Lectures

ON

TWENTY-FIVE YEARS' EXPERIENCE OF URINARY SURGERY IN ENGLAND.

Delivered before the Harveian Society of London on Nov. 7th, 14th, and 21st,

BY G. BUCKSTON BROWNE.

LECTURE II.[1]

Delivered on Nov. 14th, 1901.

MR. PRESIDENT AND GENTLEMEN,—Great improvement has taken place in the treatment of enlargement of the prostate gland during the last quarter of a century. When I began practice antisepticism as applied to catheterism was unknown, and the great success of modern treatment is undoubtedly based upon attention to antiseptic detail, better surgical instruments, and greater skill and knowledge in their employment. Particularly of late, as a background for the display of would-be remedial operations, the prospects of the prostatic patient have been painted in the blackest possible colours. I believe all this to be a mistake. No doubt by a patient's neglect of himself, or by error in surgical treatment, intense cystitis may be brought on, resulting in much suffering; but even this is remediable by simple means, whereas if the patient be not careless, and if he be judiciously treated, I would say that he was more likely than not to live to a considerable age, for I have the greatest respect for the average prostatic patient's constitution. The prostatic patient is often remarkable for his energy, force of character, intellectuality, and general success in life. The prostate is a sexual organ and it appears to exercise no urinary function whatever, although learned papers have been written upon its urinary importance in health, the apparently obvious fact being overlooked that women perform their urinary functions very well without it.

Why the prostate undergoes enlargement is not very clear and no satisfactory theory has yet been brought forward. I think the affection is more common among the sedentary and well-to-do, but it is found amongst men who are the very reverse of this. It certainly is often seen after a second marriage, or after a marriage late in life; but, on the other hand, I have met with great enlargement in men remarkable for their life-long asceticism, celibacy, and piety, so that with regard to the etiology of prostatic enlargement one feels still at sea. If pressed, however, to advise how best this malady is to be avoided I should advise plain living, exercise on foot, and very moderate worship at the shrine of Venus after 50 years of age. It has often been remarked in writings on the enlarged prostate that if a prostatic patient who fails to empty his bladder be left alone a time comes when cystitis occurs and the urine becomes cloudy and offensive. This is not so in the vast majority of cases unless instruments have been used, and almost always is due to some imperfection in the antisepticism employed.

We will therefore begin by a consideration of the practicable antiseptics of catheterism. I believe the strictest and greatest authorities on antiseptics allow that there is no perfect antisepticism, and that antisepticism is an attempt only at perfection. Nature allows and provides for a certain amount of error. It remains for us, therefore, to find some system which is sufficiently perfect to avoid infection of the bladder, and at the same time sufficiently simple to be practicable for the busy patient who is engaged in all the ordinary duties of life. For many years I have provided the patient requiring the use of the gum elastic or rubber catheter with the following outfit—a tube of antiseptic pellets (one of which dissolved in a pint of boiled water yields 1 in 1000 of perchloride of mercury); a pint bottle; a glass tube 13 inches long, one and a quarter inches in diameter, fitted with a cork and stand; a box divided into seven compartments, each compartment holding a catheter, and labelled after the days of the week, made of

[1] Lecture I. was published in THE LANCET of Nov. 16th, 1901, p. 1317.

cheap material so as to be burned when soiled, and easily replaced, or of tin, and therefore easily purified by boiling; and a pot of plain white vaseline, or with the addition of 5 per cent. of oil of eucalyptus. In his bedroom the patient is directed to keep a vessel with a lid, filled with water which has been boiled, and a supply of clean, small, soft, rough towels, so distinctive that they cannot be used except by accident for ordinary purposes. The patient dissolves a pellet in the pint bottle filled with boiled water, and from this pint he fills his upright glass tube. We will suppose that his catheters are handed to him in a pure state. He uses a catheter at bedtime, withdraws it, wipes it, and then washes it in soap-and-water, and places it in the upright tube for the night. The catheter being upright in the tube, the inside is thoroughly exposed to the antiseptic solution, and there is no need to have interiors of catheters smooth and polished, as has been proposed, and which adds to their expense. If the catheter has been put into the tube at bedtime it can be taken out the next morning, rinsed in water which has been boiled, dried, and put away in its compartment in the seven-compartmented box until its day for use comes round again. If a catheter is required four or five times in 24 hours it can, after each using, be washed and put back into the tube during the day of usage, although it is found in practice that simple washing during the day is sufficient if the catheter have its antiseptic bath at night. Men engaged during the day away from home and travellers carry two or three or more clean catheters in little metal boxes (which can be boiled) in their pockets, transferring the catheters when used to another pocket, and waiting until evening and their bedroom is reached before washing them all, and placing them in the antiseptic solution. One tubeful of perchloride solution will purify five or six well-washed catheters. Gum-elastic catheters by good makers will bear 12 hours' immersion in 1 in 1000 of perchloride of mercury well, and carefully used in this way will last for years. Vulcanised indiarubber catheters may, if desired, be left in this antiseptic bath altogether without sustaining any injury. The receptacle for the lubricant employed should be small, so that the latter is frequently renewed and the former should be frequently cleaned. The glans penis must be kept clean with soap and-water and the hands well washed. If these simple directions be carried out the urine will keep sweet and clear and cystitis will never be set up. All metal instruments, such as silver catheters and vesical and urethral sounds, should be boiled. No prostatic patient should be touched by any instrument which the surgeon is not perfectly satisfied with and would not use if necessary upon his own person, for if one impure contact be made the patient may never be the same again and it may be the starting-point of almost endless trouble. At one time I thought that the bladder never became infected unless impure instruments had been used, but I have had occasion to change this view, having found bacterial urine in the male bladder virgin to all instruments, but this is very exceptional, and we must insist upon practicable antisepticism in urinary surgery.

When an elderly man requires the use of a catheter it may be that he simply fails to empty the bladder by his natural efforts to the extent of a few ounces, or that he has an acute attack of retention of urine, or that he has for a long time failed to empty the bladder, that organ having become distended and containing habitually a large quantity of urine, the urine passed naturally being simply overflow. But whatever the precise reason for the catheterism the patient may be said to be standing on the brink of a precipice and the surgeon who comes forward to lead him to firmer and safer ground must act from the very first with caution, otherwise it is possible that both surgeon and patient may fall into the abyss, the patient losing his life and the surgeon his reputation. In other words, the absolutely necessary catheterism may result in illness leading to the death of the patient and to the destruction of the surgeon's reputation as a healer of men. Here, just as in the surgery of stone, we are face to face with urinary fever, and we must act from the very outset so as to avoid it if possible. Instrumentation must be gentle and skilful and the patient be kept warm and quiet, for exposure to cold and shaking of the body, as in travelling, both tend still further to embarrass the renal action, if it has already been disturbed by catheterism. Therefore, it is always well to attend the patient in his own warm room, and elderly feeble men should be kept for a few days altogether in bed. If a patient has sought advice in time and has been properly attended to he will probably never have complete acute prostatic retention of urine, and certainly will never come to the chronic state of retention of urine where the bladder is full and the urine dribbles away. If a patient comes to acute retention of urine he certainly has to be introduced to the catheter under the most unfavourable circumstances and with very little ceremony. The bladder must be relieved as speedily as possible, for the longer the retention the less likely is the bladder to regain its contractile power. It is in these cases that so often great difficulty is experienced in passing a catheter, and catheterism proving unsuccessful the patient is subjected to some formidable operation. We often read in the medical press statements of which the two following are fair examples. A surgeon writes of his patient, aged 81 years, suffering from retention: "The prostate as felt per rectum was enormously enlarged and no catheter could be passed, the growth blocking the urethra completely." Another surgeon writes of his case: "After this it was impossible for two days to introduce a catheter." In both these cases the patients were promptly castrated. Now in such cases as these there is no doubt as to the existence of a urethra from meatus to bladder. I take it that there was no urethral stricture, and I do not admit that there is such a thing as prostatic stricture; therefore, the only reason why a catheter did not pass along the urethra and into the bladder was that the canal was tortuous—that is to say, irregularly bent and winding; and it is obvious that, given faith, determination, and skill, which in this connexion is only another term for experience, it must really have been possible to pass catheters into these bladders. I wish, indeed, to take this opportunity of asserting most emphatically *that there are no cases of prostatic disease where it is impossible to pass a catheter into the bladder.* When once a catheter is passed the patient is on the high road to recovery and he is spared the risks of severe surgical procedures when, owing to his state of health and his age, he is particularly ill-fitted to be the central figure in an operation scene and at a time when "the keepers of the house shall tremble, and the strong men shall bow themselves, and the grinders cease because they are few, and those that look out of the windows be darkened." If a catheter will not pass readily in a case of prostatic retention it will be because the forward curve of the vesical end of the urethra is too acute for the instrument to follow it, or because the point of the catheter has caught in one or other of the two prostatic sinuses on either side of the caput gallinaginis. These sinuses form most perfectly contrived pockets or traps which receive the point of the instrument and effectually bar its onward progress into the bladder. When, therefore, the introduction of the catheter is arrested in these cases the point impinges upon the posterior wall of the urethra or is caught in one of the pockets situated in that wall. It follows that for successful introduction the point of the catheter must hug the anterior wall of the urethra, and so the whole art of catheterising the prostatic urethra with soft instruments consists in making their points avoid the posterior wall. In successful prostatic catheterism one of two things always occurs, either the catheter takes the form of the urethra or the urethra that of the catheter. In the first case, when the catheter conforms to the urethra, the instrument must necessarily be a soft one, and when a soft one is employed it is undoubtedly better for the patient. The indiarubber catheter is the safest of all and will often pass when all others have failed. Indeed, Mr. Jonathan Hutchinson (the introducer of the rubber catheter) considers that there are no cases where it will fail and in his skilful hands it has been a great success. It will be well always to begin with these catheters. But in my experience, especially if other instruments have been previously unsuccessfully attempted, this catheter may not always pass, and it will then be well to try the coudée catheter, keeping the beak well upwards all the way in. Then in point of usefulness comes the bicoudée catheter, which is a very efficacious instrument, especially when the difficulty arises from the prostatic sinuses. The olivary catheter and the English gum catheter are rarely of use in cases of real difficulty. The value of the rubber and of the coudée catheter may in certain cases be much enhanced by the use of a metal stylet. Metal stylets are of three kinds—iron, lead, and silver. The iron stylet gives form and strength to the main body of the catheter, while the end of the catheter may be left free to follow

the curve of the urethra. The leaden wire gives substance and backbone to the catheter without rigidity, and I know no more invaluable instrument in cases of great difficulty than a rubber catheter fitted with a leaden stylet stopping short of, say, three inches from the eye of the catheter. The silver stylet occupies a position between the other two; it is very yielding and at the same time full of spring, and if well curved will often carry a soft catheter safely through a greatly deformed prostatic urethra, when the curve forwards close to the bladder is very acute. If no soft catheter, either with or without a stylet, can be passed, then we must make the urethra conform to the catheter; in other words, we must use a silver instrument. The very worst cases can always be relieved by a silver instrument if the patient be anæsthetised and if the surgeon guide the point of the instrument with his left forefinger in the rectum. I have found a large silver catheter, No. 14, with a short curve and fitted with a gum stylet very useful. It is too large and blunt to catch in the prostatic sinuses, and the short curve comes readily forward on depressing the shaft of the instrument. The gum stylet is useful in preventing plugging of the catheter from blood-clot. After the bladder has been emptied a soft catheter can always be passed in if moulded on an iron stylet to the exact shape of the successful instrument and tied in.

But the most grave and anxious cases are those where the retention has been allowed to become chronic. The bladder, by percussion, can be discovered high above the pubes and the urine constantly dribbles away. No surgeon should consent to treat such cases as out-patients. It must be explained to the sufferers that the necessary treatment is as important and as delicate as the most formidable operation in surgery; they must be sent to bed and told that they will have to stay there two or three weeks. In such cases catheterism must be commenced with care and with every antiseptic detail and the bladder should only be very gradually emptied. I generally practise catheterism every six hours and if about 17 ounces be drawn off each time it will be seen that supposing the original contents of the bladder to be 40 ounces it will take four or five days before any one catheterism empties the bladder. If any pain be experienced towards the end of catheterism the catheter should at once be withdrawn. If these largely distended bladders are suddenly emptied there is almost sure, within a few hours, to be some hæmorrhage from the vesical veins which have been too suddenly relieved from a condition of chronic and severe pressure, the kidneys suffer severely from the shock, urinary fever follows, and the patient almost invariably dies; while if these bladders are only slowly emptied there may not be a rise of temperature, and, if I may so express myself, not even a pus or blood corpuscle may be seen throughout the treatment. All depends upon close and constant surgical attention and perfect submission on the part of the patient. If a prostatic patient be properly introduced to the catheter, and, if necessary, continues to use it with care and cleanliness, his prospects of life are good. The discipline alone is useful; he learns to live punctually and by rule, and necessarily avoids the excesses and indulgences which often bring other men to grief. A man dependent upon his catheter is by no means debarred from great activity, and instances are numerous of men active in politics, law, medicine, and in the Church, distinguished in the work of scientific research, and even as sailors and sportsmen, who are in this condition. I have known many such cases get well on into the "nineties," and even then it has not been to the condition of their urinary organs that they have succumbed but to complaints or accidents of an entirely different nature. I have only just lost an old patient who was born in 1806; his prostate was enormous, and I had to have catheters 17 inches long made for him; and I have another patient born in 1803 who is still alive and active and who has long been entirely dependent upon the catheter. Still, there are the exceptional cases, where there are unusual difficulties and sometimes complications, and where simple catheterism will not alone suffice or is impossible. These are the cases which have been unfortunate in their introduction to the catheter, where cystitis and possibly intense irritation have been set up—cases where catheterism is very difficult and where auto-catheterism is well-nigh impossible, owing to blindness, shaking palsy, crippled hands, and even the loss of a hand. These latter difficulties are of course got over by securing, whenever possible, the services of a good attendant. Then there are the cases where the prostate is very much enlarged, and often enlarged into the bladder, the prostatic projection acting like a foreign body and causing great irritation, and cases where, hidden away, but none the less irritating and torturing, there is a stone in the bladder, not to be detected by the ordinary method of search by a sound introduced through the urethra. A prostatic case, where the calls to empty the bladder are constant, and where perhaps catheterism is difficult and painful, and the relief obtained by catheterism evanescent, and where no vesical calculus can be found by the ordinary methods of examination, should in the first place always be thoroughly made a patient. He should be kept at rest in a warm room. His catheter should be introduced rather too often than too seldom, and by a skilled attendant. The bladder should be washed out by mild solutions of nitrate of silver, boroglycerine, or glycerine and borax. Antiseptics should be administered by the mouth, such as boric acid or urotropine, and the bowels should be kept gently active. If the case is one of simple inflammation the improvement which may take place is often astounding, and the improvement can often be rendered permanent by the patient learning exactly how to take care of himself. But if improvement does not take place a careful examination should be made under an anæsthetic; a calculus may in this way often be detected, while the extent of the prostatic growth may be defined by the finger in the rectum and the sound in the bladder. During such an examination it will be well also to use an evacuating-tube and lithotrity aspirator in order to wash out any irritating phosphatic concretion which may have eluded detection by the sound. If a stone be found it can be crushed and removed, unless for any special reasons it is thought better to perform lithotomy.

Supposing, however, lithotrity is not performed and that, in spite of all that is done so far, the patient's difficulties continue, it becomes a question what the next step should be. Many would under such circumstances recommend vasectomy, and others, bolder still, would advise the removal of the testes. Now nothing that I have ever met with has recommended these operations to me. I have never performed either of them, for I have seen so many patients after these operations not one whit the better for them, but in many ways the worse, that I have put them aside as even worse than useless. The following are fair specimens of many of my experiences. In a clergyman, aged 66 years, great irritability of the bladder came on in 1893 and a large prostate was discovered. He was submitted to double vasectomy. In 1897 he came to me, suffering much. He held urine for two hours in the day and occasionally could go three hours at night. He had pain during and after micturition. He used a catheter occasionally "to draw away clots of blood," but there was no urine to draw off after an act of natural micturition. By rectum the prostate was felt to be enormous. On sounding a large stone was found in the post-prostatic pouch. Lithotrity was performed and all his symptoms vanished. He left me well, with no retained urine, but catheterism was always followed by prostatic bleeding, showing that besides being very large the prostate remained highly vascular in spite of the vasectomy. It may be merely a coincidence and not a consequence, but it is right and fair to say that I afterwards went to hear this clergyman preach and I was sorry to find that his voice was unequal to his task. In another case the patient was aged 78 years. He had been taken with complete retention in Switzerland. Catheterism there was found to be impossible. Both vasa deferentia were tied and the bladder was opened suprapubically and a tube put in. Eventually he travelled home with his Swiss medical man, wearing a metal suprapubic tube, and came to me in October, 1897. I found the prostate enormous. I passed a catheter in the presence of the Swiss practitioner and tied it in, removed the suprapubic tube, and eventually healed up the opening. He had three years of comfortable life afterwards, but never ceased to be entirely dependent upon his catheter. Towards the end of 1900 I found him very ill indeed in the country and complaining of much penile pain. This pain was due to a phosphatic calculus which I removed, but he was worn out and died at the age of 81 years. The prostate remained of great size to the end. I saw this patient with Mr. Joseph Birt and Mr. E. H. Sweet.

It seems to me that castration and vasectomy have recommended themselves to surgeons largely engaged in hospital practice, where they see acute cases of prostatic

trouble in patients who are poor and quite unable to take even ordinary care of themselves. These patients are operated upon, and their condition, perhaps in some cases, somewhat improved, the result really being due to the care exercised in catheterism and the rest and management while in hospital. It is forgotten that prostatic patients have their ups and downs even under the most favourable circumstances. I have known a patient after a bad prostatic retention to be entirely dependent upon his catheter for 12 months and then gradually to recover all his power, until now I know that he has not used a catheter for years. Such a case if subjected to castration, had he survived the shock of the operation, would have been put down entirely to the credit of the operation. I believe that castration does no real good in genuine cases of prostatic enlargement, and I know that it is fraught with grave dangers. Many patients become insane, many become decrepit, and many sink altogether under the operation. I must say that it does seem unreasonable to associate prostatic enlargement with sexual stimulus, precisely at a time of life when all the sexual forces are naturally on the wane. I believe that the whole man depends largely as regards his character, energy, and emotions upon the condition of his testicles. In fact, to emasculate is taken to mean to deprive of strength, life, and spirit, and I have much sympathy with the poor patient who, when recommended to submit to castration, said he would rather die first. The same remarks apply to vasectomy, and as for single vasectomy, it certainly appears to me that such an operation ought never to be performed. I have known it performed in at least two cases upon comparatively young men, and both complained to me of loss of sexual power.

I am satisfied that there is only one thing to do for a prostatic patient whose sufferings cannot be cured or mitigated by the treatment already discussed, and that is to open the bladder suprapubically in order to explore digitally for stone or tumour and at any rate to obtain drainage and rest for that organ. No attempt should be made by the perineum, but the bladder should be opened above the pubes, where, however large the prostate may be, the finger can reach every nook and corner of the bladder and deal with whatever may be found. I would, in passing, point out the importance of opening the bladder in such cases upon the point of a staff. When the prostate is large that organ often comes up well above the pubes, and unless a staff is employed it is possible to incise the prostate and not the distended bladder and thus cause serious embarrassment and trouble. It is quite curious how often a bad prostatic case will prove to be really a case of calculus often hidden away in one of the many pouches to which such cases are subject. When once the finger is in the bladder these stones with care are easily found and generally easily turned out, and the case, from being one of anxiety, uncertainty, and even disappointment, becomes a brilliant success. If a stone be found and the intra-vesical prostate is not very large the prostate had better be left alone; but if there be much intra-vesical growth it will become a question for the judgment of the surgeon whether or not it should be attacked and removed. If no stone has been found and there is considerable intra-vesical growth I think it will be good policy to attack the growth. By this I mean the performance of the modern operation of prostatectomy. Prostatectomy is an English operation and was first systematised and brought before the profession in 1889 by the late much-regretted Mr. A. F. McGill, then surgeon to the General Infirmary of Leeds. It is true that Dr. Belfield of Chicago had successfully removed a middle lobe of the prostate by the suprapubic route in 1886, but of this Mr. McGill was unaware, and as the middle lobe had often been torn off by accident and by design by forceps introduced through a perineal incision there was nothing very novel about Dr. Belfield's operation. The systematic way, however, in which Mr. McGill proposed to the profession to open the bladder suprapubically and remove all obstructing prostate was entirely a new departure for which his memory deserves full credit, and the procedure may well be termed "McGill's operation." Mr. McGill laid stress upon nine special points in the technique of his operation, and it is only just and fair to him at the present moment to quote his own words from his seventh paragraph. "The prostate should be removed as far as possible by *enucleation* with the finger and not by cutting. The mucous membrane over the projecting portion having been snipped through the rest of the operation is completed with finger and forceps." From the practical surgeon's point of view the enlarged prostate pathologically is found to be either fibrous or adenomatous, and it is the latter condition which offers itself most readily for removal, large masses of pancreas-like substance readily being enucleated by the finger. In both these conditions the prostatic hypertrophy may be either (1) extra-vesical; (2) intra-vesical; or (3) both extra-vesical and intra-vesical. It is the intra-vesical growth which chiefly causes difficulty in micturition. This intra-vesical growth is often like an egg projecting into the bladder, with the vesical urethral orifice at the apex of the egg. In such cases the projection is usually equal to an eighth, or a quarter, or even half of an ordinary hen's egg. This ovoid projection may be deficient at any part of the urethral circumference. When wanting anteriorly and laterally we have the so-called middle-lobe enlargement with which all are so familiar where from behind the urethral orifice there is a projecting prostatic mass acting like a bullet valve and often causing the bladder to be entirely dependent upon the use of a catheter for the voidance of its urine. More rarely we have the ovoid projection only wanting in front and we have then a prostatic growth continuously surrounding the vesical urethral orifice on both sides and behind, or the projection may be only on one side; in such cases it is nearly always continuously combined with a posterior enlargement; while, so rarely as practically never to be met with, the intra-vesical growth is only found anterior to the urethral orifice. Intra-vesical prostatic outgrowths may be associated with considerable extra-vesical enlargement and the latter may exist without the former and cause the patient so afflicted to be partially or completely dependent upon his catheter. In my opinion it is the intra-vesical growth which can be removed with reasonable safety. The vesical urethral orifice should be left with nothing surrounding it, but level and continuous with the floor of the bladder. No doubt large adenomatous growths are often met with which can be turned out with the finger for some way down along one side or other of the urethra, but the less the urethra is injured the better, and the prostatic plexus of veins lying inside the true prostatic sheath (recto-vesical fascia) ought not even to be approached. Large masses of prostate have been successfully removed. I operated in 1889 on a man, aged 87 years, and removed four ounces in weight of prostate which I exhibited before the Clinical Society of London. Some surgeons have indeed successfully scooped out such very large masses entire that they have thought that the whole prostate has been removed. Quite lately, although prostatectomy has been a recognised operation for 12 years, there has been much discussion about the "total extirpation of the prostate" by enucleation, and it has been heralded as a new and most promising operation in operative surgery. But surely such phraseology is misleading and no anatomist would use such terms. The prostate can no more be extirpated without the use of the knife than can a piece of intestine; it is absolutely one with the urethra and bladder. The assertion was also made that the prostate could be shelled out and the urethra left uninjured. A little thought will show this to be impossible. The prostatic urethra is the prostate itself: the spongy body ends at the bulb. You cannot even peel the mucous membrane away from the prostatic urethra if you have the organs on a plate before you, much less can you do so with the blunt end of your forefinger groping at the bottom of a deep wound. The mucous membrane is not loose as it is in the œsophagus, but is adherent and bound down as in the intestines. We were also told that the prostate had been enucleated without injury to the seminal ducts, to the prostatic veins, and to the prostatic capsule. In his masterly work on anatomy Professor Thane, in describing the recto-vesical fascia, says it meets the side of the bladder along the line of its junction with the prostate and there divides into two layers; the upper unites with the muscular coat of the bladder, the lower is continued downwards, forming the sheath of the prostate, and at the apex of the gland joins the triangular ligament. "In the angle between the two layers and between the sheath and the substance of the prostate are contained the large veins of the prostatic plexus, *but these structures are so closely united by dense connective tissue that the prostatic sheath can only be dissected off the gland with difficulty.*" (The italics are mine.) It is obvious that such a dissection cannot possibly be made with the end of the finger, unassisted except by pressure from without, and groping at the bottom of a deep and bloody wound, even

if it were safe to attempt to make it. It is quite clear, I think, that the phrase "total extirpation of the prostate" has been used in error and by surgeons who have been fortunate in having only met with the simpler or adenomatous form of prostatic enlargement, where large masses are easily shelled out.

Then, again, in connexion with prostatectomy, it has been denied that when the bladder has long been dependent upon the catheter, say for 12 months, it can regain its natural expulsive power when the prostatic obstruction has been removed. I have, however, been able conclusively to prove that this denial is not correct. I have proved that the bladder can act naturally and completely, and for many years, too, after the removal of prostatic obstruction, and I proved it by the public exhibition of a case, about which there could be neither doubt nor cavil, before the Medical Society of London on March 6th, 1893. My patient had used a catheter for 20 years, and for 10 years had not passed a drop of urine except by catheter. On account of great vesical troubles I opened the bladder suprapubically on March 10th, 1892. I removed a small stone weighing nine grains, and then removed the collar of prostatic tissue which projected into the bladder below and on both sides of the urethral orifice. When shown before the society 12 months after the operation the patient was seen to be well and comfortable and all his urine was passed by his natural efforts. I am glad to say that now, in his eighty-second year, nine years after the operation, he is able to write me that he is in very good health and that no catheterism has been necessary since he left my care. This case is a very happy and successful one and shows what can be accomplished, but we must not forget that the operation is a grave and dangerous one, and I have found no reason to change the views I expressed when I exhibited the above case in 1893. These views may be summed up as follows. Firstly, I believe that suprapubic prostatectomy should never be undertaken at the outset of catheter life unless regular auto-catheterism is difficult or well-nigh impossible. In cases of real difficulty I have seen several patients where vasectomy has been performed, and there has been no lessening whatever of the catheter difficulty. It must be understood that I believe that cases where regular catheterism is impracticable are very rare, and it is for these only that I would recommend suprapubic prostatectomy. Secondly, prostatectomy should never be undertaken as long as the ordinary catheter life is a tolerable one. Thirdly, if catheter life becomes intolerable, suprapubic cystotomy should be resorted to. By means of this proceeding the bladder can be thoroughly explored and any stone removed, which in these cases may easily have escaped detection by the more usual methods of examination. The prostatic growth can be fully examined and removed if the operator think it right to do so. If he deem removal inadvisable he can leave the patient with a suprapubic tube for permanent after-wear with the certainty that he will have materially improved the condition of the patient. Finally, should the operator decide to remove the prostatic obstruction there is a very good prospect, but not a certainty, of the power of natural micturition being restored to the patient. I would therefore strongly recommend all prostatic patients and their advisers to be content with the catheter life as long as it is tolerable, and in the vast majority of cases, with reasonable care, it will remain tolerable into extreme old age—until the end comes probably through other channels. I believe that, as Mr. Jonathan Hutchinson once said to me, "good surgery may often be combined with bad practice." The work of the world is not always done by those who are completely well. It is not wise for the elderly to run grave risks only on the chance of obtaining complete comfort. There is much truth in what Thomas Hardy says of one of his most fascinating heroines: "In considering what she was not he overlooked what she was and forgot that the defective can be more than the entire."

PROPOSED NEW WORKHOUSE INFIRMARY FOR EXETER.—At the meeting of the Exeter Board of Guardians held on Nov. 12th it was decided to obtain plans for a new workhouse infirmary to contain 150 beds at a cost not exceeding £80 per bed. It was further determined that the building should be constructed in sections, and that the first section, comprising the administrative block, labour wards, and isolation and children's wards, should be taken in hand as soon as arrangements could be made.

ANATOMICAL PREPARATION-MAKING AS DEVISED AND PRACTISED AT THE UNIVERSITY OF EDINBURGH AND AT THE HUNTERIAN MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

BY J. BELL PETTIGREW, M.D., F.R.C.P. EDIN., LL.D., F.R.S., &C.,

CHANDOS PROFESSOR OF MEDICINE AND ANATOMY AT THE UNIVERSITY OF ST. ANDREWS.

HAVING of late years been frequently asked by anatomists, physiologists, surgeons, and others to give an account of my methods of making and preserving anatomical dissections for teaching, examination, and museum purposes, I feel it to be my duty to comply with the request. I should possibly have attended to this matter long ago, but did not deem it of sufficient importance to demand separate treatment. As, however, my anatomical and other friends think otherwise I have no option but to accede to their wishes. It will save time, and possibly add interest, if I treat the subject historically and from a personal point of view.

My connexion with anatomy began in the winter of 1855, when I attended a course of anatomical lectures at the Royal College of Surgeons of Edinburgh under the late Dr. John Struthers, then teacher of anatomy at the Extra-mural Medical School of Edinburgh, and a most painstaking and enthusiastic anatomist. He subsequently became professor of anatomy at the University of Aberdeen and did much to make the Aberdeen Medical School a success. Latterly he became my colleague at the Council of Medical Education and Registration of the United Kingdom, President of the Royal College of Surgeons of Edinburgh, and a knight of the realm. I did no dissection or anatomical reading under Dr. Struthers as I had not then made up my mind to become a medical student, my chief object being to test my nerves as to anatomical procedure. I also this winter (1855) attended a course of natural history at the Free Church College of Edinburgh under the sagacious and thoughtful Professor William Fleming. The natural history lectures were a great source of pleasure to me as I had always been fond of all kinds of natural objects living and dead. The lectures of Dr. Struthers and Professor Fleming determined me to adopt medicine as a profession.

The winter of 1856 found me a fully fledged medical student at the University of Edinburgh. Here I came under the influence of quite a galaxy of genius and talent. The University of Edinburgh was then, and during my medical student days, in the zenith of its reputation as a medical school. The professoriate literally bristled with great names. There was not a single professor who had not written his name in large letters on the scroll of fame. John Hutton Balfour taught botany, George J. Allman natural history, William Gregory chemistry, John Goodsir anatomy, John Hughes Bennett physiology, James Young Simpson midwifery, Robert Christison materia medica, Thomas Traill medical jurisprudence, William Henderson pathology, James Miller surgery, James Syme clinical surgery, and Thomas Laycock the practice of physic. The teachers in the Extra-mural Medical School were scarcely less distinguished and included the well-known names of Stevenson Macadam (chemistry), John Struthers (anatomy), William Sanders (physiology), William T. Gairdner and Warburton Begbie (practice of physic), James Spence, Patrick Heron Watson, and Joseph Lister (surgery), Alexander Keiller (midwifery), Daniel Haldane (pathology), and Douglas Maclagan and Henry D. Littlejohn (medical jurisprudence). There was keen rivalry as between the university professors and the teachers of the Extra-mural Medical School. It was a case of diamond cut diamond.

There was, moreover, at the time of which I write much intellectual activity at both centres of medical education in Edinburgh. Great discoveries were being made and new methods of teaching and research were being adopted. Syme was dazzling the world by his bold, original surgery; Simpson was receiving one long, continuous ovation because of his discovery of chloroform; Bennett was inaugurating a

new era in the teaching of clinical medicine by his habitual use of the microscope and his exact methods; and Lister was laying the foundation of a world-wide reputation by his researches on the blood and his investigations of rudimentary forms in their relation to antiseptics.

The intellectual activity and fame of the professors and extra-mural teachers at Edinburgh naturally attracted medical students in great numbers, and these of the best. Here the case was one of action and reaction. The cycle of great thinkers and masters in their departments produced, as was to be expected, a cycle of great students, many of whom subsequently became eminent professors, teachers, physicians, and surgeons. The following among others were medical students at the University of Edinburgh in my day: Thomas Grainger Stewart, William Rutherford, John Duncan, Thomas R. Fraser, John Cleland, James Crichton Browne, Arthur Gamgee, Crum Brown, Thomas Annandale, Blair Cunynghame, Robert B. Finlay, Alexander Dickson, William Mitchell Banks, Andrew Smart, William C. McIntosh, Joseph Fayrer, Thomas Clouston, Kenneth Macleod, Argyll Robertson, James Little, John Anderson, Peddie Steel, John Young, and James Rorie.

The professors were held in the very highest estimation by the students, and while there was much honest rivalry between the latter there was also a genuine *esprit de corps* in all the classes and between seniors and juniors. This good-fellowship was extended and cemented by the meetings of the students at the Royal Medical Society which took place every Friday evening during the winter session. The Royal Medical Society of Edinburgh is quite the oldest, wealthiest, and most important medical students' society in the kingdom. It was founded in 1737, and incorporated by Royal Charter in 1778. It has its own buildings, consisting of a large handsome debating hall, a very extensive library (20,000 volumes), chemical and botanical museums, reading-rooms, &c. Its ample and illustrious roll of ordinary members contains many of the greatest names connected with literature, science, and medicine, during the past 164 years; amongst others those of Mark Akenside, Oliver Goldsmith, William Cullen, Alexander Munro, James Gregory, Benjamin Franklin, Joseph Priestley, Percival Pott, Sydney Smith, Robert Liston, Mungo Park, William Sharpey, John Brown, Robert Christison, James Syme, John H. Balfour, Jonathan Pereira, James Young Simpson, John Goodsir, John Hughes Bennett, W. B. Carpenter, W. R. Sanders, Charles Murchison, W. H. Broadbent, Richard Owen, J. Matthews Duncan, and Joseph Lister. At the Friday evening meetings of the society an original paper was read and was keenly debated and discussed. This was the best training in the world for future public men. It taught them the forms of procedure and gave them opportunities of speaking which were simply invaluable. After the debate tea and coffee were served and the students returned to their rooms, exhilarated and refreshed, forgetful of the drudgery of the week.

The training at Edinburgh University in my time was more practical than bookish, and students were taught to think and to act for themselves as independent members of society. This developed character and gave rise to originality of treatment in the various subjects handled. At the end of each winter session the society gave a great dinner to which the professors, extra-mural lecturers, the judges, town dignitaries, and celebrated men were invited. The relations between the students and the professors were of the most cordial description. Syme, Bennett, Simpson, and Goodsir were especial favourites. Syme captivated the students by his indomitable pluck and energy, and by his terse, vigorous way of putting things, as exemplified in his very admirable and much-prized surgical writings. I had the good fortune to be selected as one of his clinical surgical dressers, and subsequently as his resident house surgeon, and I owe him a deep debt of gratitude for many favours received. Syme was public-spirited and masterful and stood up for the rights of the students on all occasions. He was the very embodiment of hospitality. Few *savants* visited Edinburgh who were not entertained by him in right princely fashion. He had as intimate friend and counsellor the celebrated Dr. John Brown, the author of "Rab and his Friends," "The Twa Dogs," "Horæ Subsecivæ," &c.

Bennett taught physiology with much acceptance, but it was as a great teacher of clinical medicine that he made his mark and out-distanced all competitors. His work on Clinical Medicine was of the nature of a revelation at the time it was written. He was noted for his great clinical acumen and slashing oratory, and, at times, for his scathing sarcasm. He was, notwithstanding, one of the kindest and most entertaining of men. As his class assistant for two years I knew him well.

Simpson was a great power in the University. He was justly celebrated for his originality and persuasive eloquence. His introduction of chloroform as an anæsthetic, God's choicest gift to suffering humanity, placed him on a pedestal all his own. His researches in obstetrics, acupressure, archæology, and other subjects carried his fame to all lands. Of him it could fittingly be said,—

> "He was a scholar, and a ripe and good one;
> Exceeding wise, fair spoken, and persuading."

Goodsir attracted the students by his studious habits, his transparent honesty of purpose, wide grasp, and lofty ideals. He was without doubt one of the greatest human and comparative anatomists Scotland has produced. He was deeply versed in cells, morphology, and teleology, and anticipated Virchow in much of his work on the first. He was profoundly learned, a philosopher of a high cast, intent on getting at the root of everything. His teaching was considerably above his junior students, but they, with the seniors, listened with rapt attention. He inspired everyone with his own enthusiasm and love of research. He devoted himself soul and body to his work, and for this sacrificed everything, even his health. He had, by continuous over-exertion, brought on paraplegia, as his co-professor in the chair of Logic, the celebrated Sir William Hamilton, had, by similar means, induced hemiplegia.

The late Professor William Sharpey of London told me on one occasion that Goodsir's habit was to read and to work late into the night, and instead of going to bed to throw himself on a sofa for an hour or two and to get to work again. While he was frail, very frail, on his feet, his head and hands were the head and hands of a giant. It was a touching sight to see him in his class-room steadying himself for a great effort—a grand generalisation in human or comparative anatomy or a trenchant criticism of an unworthy or unprincipled opponent. In such cases his luminous grey eyes flashed, a little bead of foamy saliva gathered on his lips, and his arms, if free, went like flails. A storm of applause invariably followed these efforts. The enthusiasm and honesty of purpose of the man were catching and ran through the students like electricity. If his students did not all succeed in completely following the great and original anatomist they all revered and admired him, and none, however obtuse, came quite empty away.

Under Goodsir and his predecessors in the chair of Anatomy—the three Munros, especially Munro *secundus*—the Edinburgh School of Medicine had acquired a great reputation for its elaborate and highly finished dissections, a circumstance which contributed in no small degree to the production of a race of great Edinburgh surgeons. Goodsir and Munro *secundus* were especially celebrated for their superb vermilion injections of animal organs and tissues of all kinds and no finer examples of such injections can anywhere be seen than in the anatomical museum of the University of Edinburgh. Goodsir was a great dissector and preparation-maker and had a hearty and profound appreciation of carefully executed, finished dissections. He had large, powerful, finely shaped hands and wielded the scalpel with a dexterity and grace truly remarkable. He had no patience with slovenly work and his students had no excuse for being bad or even mediocre dissectors. He placed before them the finest models, not only in the dissecting-room, but also in the University anatomical museum.

It should here be stated that there is the greatest possible difference between the dry dissections seen in the dissecting-room and the wet dissections seen in the museum. An ordinary dissecting-room specimen, however well executed, if placed in water or spirit at once becomes a mass of untidiness and fluff. This follows because the fluid softens and floats out the cellular and other tissues and reveals any accidentally cut fibres or flaws. The dissection made under fluid is infinitely more difficult and it is only a master and expert in dissection who can make wet preparations. The time required to make a wet dissection is, moreover, six or eight times greater than that required to make a dry one.

As showing Goodsir's passion for dissection he exclaimed on one occasion, "I love the horse, I have dissected him three times." Goodsir and the famous Queen's sculptor for Scotland, John Steel, with whom I was intimate, dissected

and took plaster casts of the horse together. These I have often examined and admired in Steel's studio. Goodsir had a high appreciation of the most beautiful and most spirited of animals and drove the handsomest horses in Edinburgh.

Goodsir had under him as sub-curator of the anatomical museum and factotum Mr. A. B. Stirling, one of the most remarkable men ever connected with a medical school. Mr. Stirling was a self-made, self-educated man, but naturally a gentleman. By great industry, constant application, and inherent ability, he overcame all obstacles. He could turn his hand to anything. He prepared and injected subjects for dissecting, macerated bones, articulated skeletons, took plaster-of-Paris casts, made glass cases and microscopic cabinets, mounted preparations, re-distilled foul spirit, and attended to the anatomical department generally. Latterly he developed quite a genius for injecting and making microscopic specimens. He was the first to provide microscopic slides on a large scale for students. These were sometimes injected and sometimes stained, and were, as a rule, wonderfully beautiful and illustrative. His spinal cord and brain specimens, of which I have a unique collection, were quite the largest and finest seen in his day. He was the original inventor of the microtome, or graduated microscopic section-cutter, and excelled all others in mechanical microscopic methods. By means of his microtome he made the thinnest microscopic sections on record. To his many accomplishments he added much tact and great kindliness of disposition. He was ever ready to help others and his deferential, resourceful, responsive nature made him a great favourite.

I have dwelt upon Professor Goodsir and his able lieutenant because towards the end of my career as a medical student at the University of Edinburgh I was brought much in contact with both.

At the end of the winter session 1857–58 Professor Goodsir gave out as the subject of his senior anatomy gold medal for session 1858–59, "The Arrangement of the Muscular Fibres in the Ventricles of the Vertebrate Heart." This formed the veritable Gordian knot of anatomy and had been a subject of dispute for some 200 years. Vesalius, Albinus, Haller, and De Blainville had all confessed their inability to unravel it. It certainly was a tough piece of work to ask students to undertake, but the problem was quite Goodsirian in character. It was involved and knotty, but explanation there certainly was if it could only be dug out. Many of us stood aghast when the subject of competition was announced, but it gradually settled into our slow, persevering Scotch minds, my own amongst the rest, and became less formidable on closer acquaintance and as time rolled on, on the principle that "familiarity breeds contempt."

Like Don Quixote I determined to have a tilt at the windmill. Having fortified myself with all the literature on the subject I could lay hands on I left Edinburgh for my home in Lanarkshire. Arrived there I eagerly scanned and mentally took note of everything written on the structure of the ventricles. The accounts given were meagre, conflicting, and so unsatisfactory that I resolved to investigate the subject *de novo*. I at once proceeded to dissect every kind of heart within reach and in large numbers. I also took the precaution of making careful drawings and notes of each dissection for future reference and comparison. The hearts chiefly employed, at the outset, were those of the sheep, calf, ox, and horse. I soon found that if satisfactory progress was to be made I must devise a new method of dissection, and it was at this juncture that my career as an original dissector and maker of preparations began. After frequent attempts and failures at hardening the ventricles of the heart by means of methylated spirits, chemicals, &c., I hit upon the expedient of stuffing and gently distending them with dry oatmeal, a truly Scottish procedure, and slowly boiling them for from four to five hours. This enabled me to get quit of all the external fat, blood-vessels, nerves, lymphatics, and cellular tissue. I then immersed the ventricles in proof methylated spirit for a fortnight or three weeks to harden them. I found that the ventricles so treated were in the best possible condition for dissecting, and that, as a matter of fact, I could separate and peel off the muscular fibres of the ventricles in layers as I would the layers of an onion. The new mode of dissection virtually gave me the whip-hand of the situation. I soon satisfied myself that not only did the muscular fibres of the ventricles form layers, but that the layers were of two kinds—namely, external and internal—and that the muscular fibres forming the external layers wound in a spiral direction from left to right from above downwards, while the fibres forming the internal layers wound in an opposite spiral direction from right to left from below upwards; that, in fact, the muscular fibres of the external and internal layers formed two sets of opposite spirals which crossed each other, the crossings becoming more oblique as the fibres constituting the central layers were reached. I subsequently discovered that the muscular fibres forming the external layers were divided into two sets of spirals (a right- and a left-handed set), and that the muscular fibres forming the internal layers were similarly divided into two sets and formed opposite and complemental spirals; the two sets of external spirals being largely continuous with the two sets of internal spirals at the apex and at the base of the ventricles and producing perfect symmetry, the symmetry being most marked in the left ventricle. The ventricles were evidently constructed on the lattice girder principle where stays and struts are employed in every direction to give the greatest amount of strength with the least possible material. Here was an anatomical puzzle of the first magnitude. I was sorely perplexed, the more so as I found that the spiral external muscular fibres were, as stated, for the most part continuous with the spiral internal muscular fibres at both the apex and base of the ventricles. I paused and pondered, but no further light was vouchsafed. A lucky accident came to my assistance. One day I came down to dinner a little earlier than usual, and casually taking up a newspaper commenced to roll it layer upon layer obliquely from one corner as grocers do in making conical paper bags. I observed to my surprise that the lines of print on the several layers of the newspaper ran in different directions according to a graduated order; the lines of print on the outer layers running spirally from left to right downwards and becoming more oblique as the central layer was reached; the lines of print on the inner layers running spirally from right to left upwards and becoming more vertical as the central layers were receded from. The lines of print on the external and internal layers crossed each other at increasing angles letter of X fashion as the central layer was approached. I observed further that the lines of print forming the external layers of the newspaper were continuous at the apex of the cone with the lines of print forming the internal layers of the newspaper, and that if I folded the internal layers of the newspaper outwards at the base of the cone the various internal lines of print corresponded in direction with the various external lines of print, producing continuity of the print at the apex and base respectively, as in the ventricles of the heart, and giving rise to a methodical but complicated series of figure of eight loops, the loops being directed vertically in the superficial layers and transversely in the deeper layers. A closer examination of the newspaper cone with its lines of print revealed a mathematical arrangement of marvellous complexity and beauty; the lines of print on the outside and inside layers of the cone making left and right spirals continuous at apex and base and gradually changing direction and crossing at more oblique angles as the central layer was reached.[1] Here was the whole thing in a nutshell. It was a case of the reading turning in or involuting at the apex and of the reading turning out or evoluting at the base. It was, in short, a mathematical problem of the most intricate yet simple description. I involuntarily cried, "εὕρηκα," as I instinctively felt that I had mastered the problem. The rest was easy. It was simply a matter of further dissection and accumulated proof.

When the beginning of the winter session (1858–59) came round I betook myself to Edinburgh with all my belongings in the shape of dissections, drawings, notes, &c. Arrived there, I at once cast about for fresh material. I ransacked the leading fish-shops and obtained the hearts of the cod, salmon, sunfish, fishing frog, and turbot. I was fortunate in securing the heart of a monster shark which was killed in the Firth of Forth. I also called at the large hotels and got several fine turtle hearts. I likewise procured the hearts of the tortoise and alligator. I further made raids on the poulterers and got the hearts of the duck, goose, capercailzie, and turkey, and one splendid swan's heart.

The arrangement of the muscular fibres in the ventricles of the heart of the fish, turtle, &c., was simple and interesting, but did not throw much light on the complicated arrangement met with in the ventricles of the bird and

[1] Two sheets of newspaper set at a certain angle and rolled into a cone, the one within the other, give the two sets of external spiral readings and the two sets of internal spiral readings running in opposite directions which produce perfect symmetry.

mammal. The muscular fibres in the former follow a vertical, oblique, and transverse plicated direction with certain fibres running from without inwards, and the converse, in such a manner as to antagonise each other and to give rise to a porous, spongy condition of the interior of the ventricular wall, an arrangement calculated to confer great strength and to triturate and mix the blood where required. The arrangement of the muscular fibres of the ventricles of the bird was in every respect similar to that occurring in the ventricles of the mammal, with the exception that in the right ventricle of the bird a muscular valve took the place of the fibrous tricuspid valve in the mammal, a modification readily secured by the muscular fibres which in the right ventricle of the bird fold over and are continuous at the base, splitting into two and forming a concave pouch—the concavity of which is directed downwards and towards the septum of the ventricles.

I dissected a comparatively large number of mammalian ventricles, including those of the sheep, calf, ox, horse, deer, pig, porpoise, seal, lion, giraffe, camel, and man. I found that as a whole the ventricles of the sheep gave the best results. I made in all 112 finished dissections and drawings of the ventricles referred to. These dissections and drawings were made in my lodgings in the small hours of the morning when my other work was over for the day, and none of my fellow-students knew that I was at work on the subject. Time passed rapidly and when it was within a fortnight or so of the period fixed for giving in the dissections, drawings, and descriptions thereof I had still much to do. There was nothing for it but to work night and day and this I did continuously for over a week. My dissections, drawings, and essay were labeled "*Per ardua*," Professor Goodsir and all others being ignorant of the author. The day for awarding the medal came round and the great anatomical theatre was crowded with some 400 students all more or less on the *qui vive*. The professor's table was littered with dissections in flat glass jars immersed in pure spirit. There had evidently been a keen competition and curiosity was raised to a high pitch because of the praise lavished upon some student as yet unknown. When the envelopes containing the mottoes of the competitors were opened I found to my surprise that I was the lucky one. A hearty round of applause followed the announcement and everyone seemed pleased. Professor Goodsir asked me to call on him next day which I did. He was anxious that the heart dissections should be presented to the anatomical museum of the University of Edinburgh and mounted in separate glass jars as a collection. He also requested that I should do the mounting myself. I readily assented to both propositions, feeling that the dissections, if valuable, should be deposited in some public institution and available for reference.

During the summer session of 1859 I permanently put up in neat glass jars, with glass tops designed by Professor Goodsir, my 112 original dissections. While so engaged I worked in one of Professor Goodsir's rooms next to that usually occupied by Mr. A. B. Stirling. This was my first experience in mounting preparations permanently for museum purposes. Mr. Stirling imparted much useful information and was very kind. He gave me my first lessons in injecting, showed me how to re-distil soiled spirit, to make and mount microscopic specimens, &c. I was greatly indebted to him in many ways and had a sincere regard for him.

The higher dissection and preparation-making require much patience, skill, and delicacy of manipulation. It also requires much time. I, however, loved the work. During the summer of 1859 I took photographs of my dissections in their jars on the roof of the anatomical department of the University of Edinburgh with a view to illustrate and remodel my essay in memoir form, "On the Arrangement of the Muscular Fibres in the Ventricles of the Vertebrate Heart," which was to be communicated to the Royal Society of London.[1]

In the autumn of 1859 Professor Syme, Professor Sharpey, and Professor Allan Thompson paid me a visit at the University of Edinburgh Anatomical Museum to inspect my dissections, and Professor Sharpey was so favourably impressed that he expressed the opinion that they should form the subject of the Croonian Lecture of the Royal Society of London for 1860. His opinion having been endorsed by the council of the society I was invited to discharge that onerous duty in April of that year. Having had no experience as a lecturer, and being only a third-year medical student, I undertook the task with grave misgiving. The lecture, however, passed off very satisfactorily and evidently gave great satisfaction. I had prepared large transparent models of the ventricles of the heart which showed how the two sets of spiral external fibres became continuous with the two sets of spiral internal fibres at the apex and the base, and how the spiral external and internal fibres formed external and internal layers. These models fairly captivated the audience; the more especially as they were corroborated in every detail by the actual dissections which were on the table beside me. An abstract of my Croonian Lecture was published in the Proceedings of the Royal Society under date April 19th, 1860.

At the end of the winter session 1859–60 Professor Goodsir gave out as the subject of his senior anatomy gold medal, "The Nerves and Ganglia of the Vertebrate Heart." The subject, however, was considered so difficult that no one competed for the much-coveted prize. In the summer and autumn of 1860 I had to prepare for the Medical Faculty an original thesis or inaugural dissertation on some scientific or professional subject with a view to graduate in medicine in 1861, and was induced to tackle the dissection of the nerves and ganglia of the heart: a fresh hare was put up for me, and this more swift and cunning than the first. I selected as the title of my thesis, "The Ganglia and Nerves of the Heart and their Connexion with the Cerebro-spinal and Sympathetic Systems in Mammalia." The preparation of the said thesis was, as I soon discovered, a very arduous task, as it necessitated my making a series of very difficult and delicate dissections. The dissections were carried on in a private room adjoining the anatomical museum, where I had frequent visits from Professor Goodsir. The interest which he took in the work as it progressed was quite remarkable. I made 52 nerve-dissections in all—namely, three large dissections of the calf, cat, and rabbit showing the connexion of the cardiac nerves with the cerebro-spinal and sympathetic systems of nerves, and 49 smaller dissections showing the distribution of the nerves and ganglia on the large vessels (the aorta and pulmonary artery) at the root of the heart, and the small vessels (the coronary sinus, anterior and posterior coronary arteries, &c.) on the surfaces and in the substance of the heart. I also prepared numerous microscopic specimens of the cardiac ganglia to show how the cardiac nerves were connected with the nerve-cells. The hearts dissected comprised those of man, the horse, calf, sheep, camel, panther, alpaca, and seal.

In this investigation, as in that of the muscular fibres of the ventricles of the heart, I had to devise a new mode of dissection. As everyone knows, the sulci or grooves separating the different portions of the heart, if not the heart itself, are loaded with fat, and in this fat the nerves, in some cases as fine as silk threads, are for the most part lodged. It was of no use attempting to remove the fat by the ordinary methods of dissection; it stuck to the scalpel, and in trying to get rid of it the nerves were displaced, stretched, and, in many cases, cut. I therefore fell back on my hot-water process, but in a modified form. The nerves of the heart were much too delicate to admit of boiling; I consequently employed hot water, a little below the boiling point, and with remarkably good results.

As the cardiac nerves were also too fine to bear handling or rough treatment of any kind I constructed an oblong metal trough to contain the hot water. This was provided with broad flat ledges to support my arms and hands when dissecting; the trough had at either end an arrangement for receiving a revolving spindle which could be elevated and depressed at pleasure. The heart to be dissected was transfixed by the spindle which ran through one of the openings of the left auricle and the apex of the left ventricle. The spindle, with the heart fixed on it as explained, could be placed in any convenient part of the trough and elevated or lowered and rotated at will. I was thus enabled to work at the nerves on any part of the surface of the heart without handling the viscus—a matter of very considerable importance where everything was so fragile. When everything was ready and the spindle and heart were in position the trough was filled with nearly boiling water, the water being allowed to rise half an inch or so above the surface of the heart, the nerves of which were dissected under the hot water. The nerves were not dissected in the ordinary way with forceps and scalpel or with forceps and scissors. This would have

[1] The memoir I find was communicated to the Royal Society of London by Professor John Goodsir on Nov. 22nd, 1859. It was published *in extenso* with five plates (72 figures) in the Philosophical Transactions in 1864.

resulted in the stretching, displacing, breaking, and cutting of the nerves. I therefore took an old nerve scalpel and blunted its cutting edge and point, and employed it as a needle for teasing out the fat, cellular tissue, &c., in which the nerves were imbedded. The fat, being partially melted by the hot water, was in the best possible condition for being teased out and, when so treated, it floated away. I never employed a knife and very rarely scissors. By these means I was enabled to dissect the most delicate cardiac nerves *in situ*. They were in no case dragged or displaced. The hot water, moreover, always kept them taut and as they appeared prior to dissection.

The hot-water method of dissecting was, in warm weather, very oppressive and severe on the eyes, but very satisfactory. The more heat and light, the better the result. It had only one drawback: the hearts if not worked off in three or four days at most were apt to become soft and to putrefy. This tendency to decay involved continuous work and a great strain while dissecting, so much so that, looking back, I am inclined to believe that the hot-water nerve-dissections were the most troublesome and difficult I have ever executed. When the hearts which were dissected under hot water were freed from fat, cellular tissue, &c., and the nerves were carefully dissected out, I boiled them, in some cases, in sulphuric ether—an expensive and ticklish process—resulting, in my case, in two rather serious explosions. The hot ether dissolved any tiny particles of fat which had escaped the hot water and my improvised blunted teasing scalpel. The nerve-dissections of the heart prepared in this way presented such a clean smooth surface that in some cases they appeared more or less polished. One great advantage of the process was the non-stretching and keeping of the nerves in exactly their original positions; the hot water, as explained, preventing the nerves from becoming lax. Care had to be exercised as to the temperature of the water employed; if too hot it shrivelled the nerves, if too cold the fat was not melted and could not be teased out.

As it was necessary in certain cases to distinguish the nerves from the finer blood-vessels, capillaries, and lymphatics I resorted in not a few instances to injecting the cardiac blood-vessels. I explained to Mr. Stirling, who worked in an adjoining room, that I would require to employ an injection which could be forced into the blood-vessels in the cold state and which would stand the heat and not shrivel on cooling. He at once suggested a cold injection of flour-and-water coloured with vermilion for the arteries and ultramarine blue for the veins. The idea was to make a stiff paste within the vessels by means of the hot water. This homely injection suited my purpose admirably and nearly all of my injected nerve-dissections of the heart were so treated.

The nerves of the heart, as already indicated, were much more difficult to dissect than the muscular fibres of the ventricles. They were gossamer in texture and the slightest slip of even the blunted scalpel made havoc. It was a case of constant watching and the strain on head, eyes, and hand was very trying. I worked at the nerve-dissections from 8 A.M. to 6 P.M. each day for a whole summer and autumn with an interval of an hour for luncheon. Nine hours' continuous work in and over hot water and in the heat and glare of summer and autumn was, to say the least, not a little fatiguing. Experience, however, taught me that it was necessary to finish the nerve-dissections with all possible dispatch. There was, as stated, a danger of their softening, and even decomposing, if the dissection was too long continued. The hot water and the heat of summer necessarily emphasised the danger. I was, however, between Scylla and Charybdis. A strong light and a strong heat were both necessary to enable me to accomplish the delicate work on which I was engaged.

The summer session of 1860 was one of the busiest of my life. I got up each morning at four o'clock, and, in the early hours wrote an essay on the "Presumption of Survivorship" which secured for me the gold medal in the class of medical jurisprudence. This essay was published in the *British and Foreign Medico-Chirurgical Review* for January, 1865. The nerve-dissections of the heart, as it turned out, were wholly successful, and, with my inaugural dissertation describing them, obtained for me in 1861, when I graduated in medicine, a thesis gold medal, the highest honour the University of Edinburgh confers. The dissertation, which was illustrated and contained drawings of the nerves of the heart and of the microscopic appearances presented by the ganglia of the nerves, was deposited in the University of Edinburgh Library where it may be consulted. The nerve-dissections themselves I presented to the anatomical museum of my *alma mater* where they can be examined. I mounted them in glass jars with glass lids as I had done the muscular-fibre preparations of the ventricles. The muscular fibre and nerve-dissections of the heart presented by me to the Anatomical Museum of the University of Edinburgh number in all 164. I subsequently photographed the nerve-dissections as I had done the muscular fibre ones, and a short account of them appeared in the proceedings of the Royal Society of Edinburgh for 1865. They were also described and figured in my lectures "On the Physiology of the Circulation in Plants, in the Lower Animals, and in Man," which were originally published in the *Edinburgh Medical Journal* during the years 1872 and 1873, and subsequently republished by Messrs. Macmillan in book form in England and America in 1874, with 150 illustrations on wood.

(To be continued.)

A NOTE ON NEISSER'S TEST FOR DIPHTHERIA BACILLI.

BY L. COBBETT, M.A., M.D. CANTAB., F.R.C.S. ENG., L.R.C.P. LOND.

(From the Pathological Laboratory, Cambridge.)

AMONG the facts which have in recent years come to light about the etiology of diphtheria two stand out as being of special practical importance[1]; I refer to the occurrence of virulent and dangerous diphtheria bacilli in the mouths of certain healthy persons, and to the fact that these persons are to be found only among those who have come into contact with the sick or with others who, like themselves, harbour the bacilli. These facts make it probable, and direct evidence is not wanting to show, that diphtheria is spread by those who, having come into contact with the sick, acquire the bacilli without being themselves ill, and who, not being recognised as infectious, are often allowed to move about freely, and are even sent to school, as much as, if not more than, by those who fall ill of the disease and are for the most part removed to hospital or isolated at home.

The duty of discovering, isolating, and disinfecting the former class of persons is becoming more and more the urgent duty of sanitary authorities. For the fact that they are not scattered broadcast throughout the community, as was once supposed, but are confined to the class of persons whom we conveniently call "contacts," renders their discovery a practical possibility and offers a fair prospect that at least the great majority of them may in the near future be subjected to isolation and antiseptic treatment, with immense advantage to the public health. The systematic use of this method of prevention in Cambridge and Colchester has, however, involved a great amount of work. Therefore anything which simplifies the methods of examination and renders them more certain will materially help to bring about the general adoption of this preventive measure by our sanitary authorities. Since the beginning of the year in Cambridge 900, and in Colchester since August about 1500, cultures have been examined for diphtheria bacilli. These include many from patients and convalescents, but the majority were from healthy contacts, mostly children.

The examination of cultures from healthy persons is apt to be a more arduous and delicate business than the examination of those from patients and convalescents, and often far more depends on an accurate report. It is particularly the case in dealing with private schools that one must be on one's guard against reporting as diphtheria bacilli the longer pseudo-diphtheria forms of Hofmann's bacillus. Moreover, when diphtheria bacilli are present they are often relatively few and are apt to be hidden in a crowd of other forms and therefore difficult to discover. In making the microscopic examinations here referred to the aim has been to make, as far as was possible, each single preparation from a single colony. Under these circumstances bacteria are more easily recognised than when different kinds are mixed together.

[1] I do not here refer to the important fact that diphtheria bacilli persist in the mouths of some convalescents long after the period when they were formerly considered free from infection, because it is already well recognised. It is, however, not so generally recognised that evidence of the complete disappearance of the bacilli cannot be considered satisfactory without three consecutive negative bacteriological examinations.

This is particularly the case when there are a few colonies of diphtheria bacilli among a lot of Hofmann bacilli. When a little group of the former is mixed with a lot of the latter it is difficult to say whether they are a group of the long or giant forms of Hofmann's bacillus or whether they are true diphtheria bacilli. But if a preparation can be made from a single colony which is thus shown to be composed entirely of the long bacilli the difficulty disappears. Several such preparations are made on a single cover-slip and arranged in parallel lines, in order that a considerable number of colonies may be passed in review in a short time. The preparations are stained and mounted in dilute methylene blue (1 in 5).

In all cases of doubt, and in most cases where bacilli bearing even a remote resemblance to the diphtheria or pseudo-diphtheria bacilli were seen, Neisser's stain has also been used. Without its aid diphtheria bacilli would have been undoubtedly missed on several occasions. This occurred when the diphtheria bacilli were mixed with a crowd of Hofmann bacilli, the character of the culture not admitting of the satisfactory examination of single colonies. In these cases Neisser's stain first revealed the diphtheria bacilli, and their subsequent isolation and examination of pure cultures showed that the stain had given the right indication. In such cases when the colonies of diphtheria bacilli are few in number and crowded with other sorts it is often difficult and tedious to prepare a second cover-slip which shall contain the bacilli which one wishes to subject to Neisser's stain. Hence arises the necessity for applying the special stain to the original cover-slip. This may be floated off, after removing the cedar oil, with filter-paper soaked in xylol, washed for a minute in 5 per cent. acetic acid, and stained by the ordinary Neisser method.

But frequently one desires to apply the test to a particular group of bacilli without moving the slide from the microscope. This led me to try the device of applying a drop of 5 per cent. acetic acid to one edge of the cover-slip and drawing the fluid under the glass by means of a small piece of filter-paper placed on the other side. If the bacilli are watched while the acid is entering under the cover-slip one sees first a current of fluid sweeping up loose bacilli and hurrying them away. A blue cloud next appears and blots out everything for a second and passes on. Then once again the field is bright and clear, and the diphtheria bacilli, if such they are, show the characteristic polar bodies as if stained in the way Neisser recommended; only the bodies of the bacilli are not brown, but pale-blue. Hofmann's bacilli also have a fairly characteristic appearance when treated in this way. They do not so easily decolourise as the diphtheria bacillus and at about the middle of each half a good deal of blue usually remains. With diphtheria bacilli the change is instantaneous, and the picture revealed is often, I think, not inferior to that of a Neisser specimen stained in the usual way. The method is so quick that it takes no appreciable time and can therefore be applied, without causing delay, to every preparation which contains micro-organisms which have the remotest resemblance to the diphtheria bacilli. I now constantly use it. For a long time I was in the habit of controlling the acid test by staining another preparation by the usual Neisser method. The results showed that when typical polar bodies are disclosed by the acid there is no necessity to use the full Neisser method. The utility of the latter seems to be restricted to the cases where the acid method gives an indecisive result. But it must be added that when the acid test is unsatisfactory the orthodox Niesser stain does not give a much better result.

I have already expressed my great appreciation of Neisser's method as a means of distinguishing the diphtheria from the pseudo-diphtheria bacillus, but it is not infallible. More than once a diphtheria bacillus (subsequently proved to be an acid-former and to be virulent for guinea-pigs) has been found, which showed no polar bodies when stained with the usual Neisser method.[1] And more frequently cultures of diphtheria bacilli have been found which showed but few polar bodies and those very small and difficult to find. In such cases I find little or no advantage in staining for two minutes in the acid blue as has recently been recommended. On the other hand, when Hofmann's bacilli are treated with Neisser's stain (or with acetic acid after methylene blue) I have several times seen a few bacilli which showed very minute polar bodies. These cultures had been sown on the previous day and were therefore about 24 hours old or less. Such bacilli have been isolated and investigated with the result that they proved to be Hofmann bacilli.

Neisser's stain, therefore, fails to show polar bodies in a small proportion of true diphtheria bacilli. And it shows minute and doubtful polar bodies in a few Hofmann bacilli. This fact detracts very little from the value of the stain as a differential test, because the exceptions to the general rule are so few. We must, then, hold that a good positive reaction is positive evidence that the bacilli are diphtheria bacilli, that a definite negative reaction is valuable evidence, but not alone conclusive, while a poor or doubtful reaction is not of much value either way.

In conclusion, I feel justified in recommending the acetic acid modification of Neisser's stain which I have described to the notice of others engaged in this work.

Cambridge.

[1] In sub-cultures they were either poorly developed or absent.

SOME PRACTICAL POINTS IN THE TREATMENT OF CASES OF FRACTURED PELVIS WITH RUPTURED BLADDER AND OF CASES OF RUPTURED URETHRA.

BY C. J. BOND, F.R.C.S. ENG.,
SURGEON TO THE LEICESTER INFIRMARY.

THERE is a certain kind of accident which seems especially characteristic of the hunting field, in which the horse rolls on the prostrate rider, crushing the pelvis and causing injuries which frequently involve the bladder or the urethra, or both. Since the report of cases by me in THE LANCET of August 10th, 1889, p. 260, describing a method of draining the injured bladder by a combined supra- and infra-pubic route, on a special staff, several such injuries have come under my notice. In all these the condition of the patient after injury is much alike. There is great pain on any movement disturbing the fractured bones, while if the thighs are gently raised they can be flexed slightly on the pelvis without undue pain. There is the tender, board-like, dull area above the pubes, spreading laterally to the groins, which is due to the extravasation of blood, and in the case of injury to the bladder the addition of extravasated urine in the pre-vesical space. There is inability to empty the bladder, and if on gently attempting to pass a catheter obstruction be encountered close to the neck of the bladder, and especially if blood be drawn and the bladder cannot be reached, then in all probability injury of the urethra also exists.

There are one or two points about the combination of fractured pelvis with injury to the bladder and urethra which are worth notice.

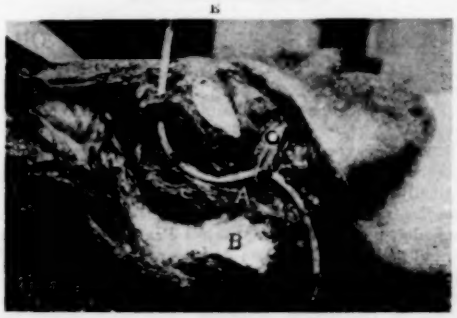
In all my cases of fractured pelvis in which the bladder has been torn the rent has been extra-peritoneal, and in the anterior wall of the bladder, and in my opinion it is caused by the direct puncturing of the vesical wall by the fractured bones. This is so constant an association that the pre-vesical space should be opened first in all these cases of bladder injury, the presence of blood and urine will then reveal the nature of the injury, and the peritoneum need not be opened, unless injured, as the posterior wall of the bladder can be explored by the finger from within the viscus.

With regard to the urethra, the position of the patient's body in relation to the crush seems to be the deciding factor. In my experience the urethra gets injured where, after the fall, the crush comes with the patient lying on his side, thus driving the fractured sides of the pubic arch together like the blades of a pair of scissors and injuring or completely dividing the urethra in its membranous portion, just in front of the apex of the prostate. On the other hand, where the pelvis is crushed from before back the urethra is more likely to escape. In the commoner example of ruptured urethra, the result of a fall astride some beam or other obstacle, the injury is the result of the crushing of the soft urethra against the unyielding bones of the pubic arch, and the anterior or distal portion is torn away from the more fixed posterior or proximal end. In this accident the rupture generally occurs rather further forward than in fractured pelvis, and the separation of the torn ends may be considerable—as much as one or two inches.

The chief point of interest, however, in these cases of fractured pelvis is the question of treatment. Prompt surgical interference is essential. It is not enough to attempt to pass a catheter, or even to succeed in doing so, if on doing so the presence of blood in the urine, or the absence of urine, or other signs still leave the question of injury to the bladder in doubt. We must remember that while fractured pelvis apart from injury to viscera is only a moderately serious accident, fractured pelvis with injury to the bladder is a very dangerous and, if unrelieved, fatal injury. Consequently in these cases it is better, under antiseptic precautions, in the first instance to cut down between the recti in front of the peritoneum and examine the pre-vesical space. If the bladder is ruptured considerable quantities of liquid blood and urine will well up from the depths of the pelvis, and this must be sponged out and the condition of the anterior wall of the bladder carefully ascertained. If the rent is anywhere within reach it can, and should, be carefully closed in the usual way with sutures, but if it extends down to the neck and into the prostate suture will probably be impossible, or will fail, and it is necessary to provide efficient drainage for the bladder. Now, the only really efficient way of draining the bladder is by a combined supra- and infra-pubic drain, and this is best accompanied by passing some such instrument as a sound, guided by the finger through the rent in the anterior wall, on through the internal meatus, and through the prostatic urethra, and making it present through the membranous urethra below the bulb under the skin in the perineum. Here it can be readily cut down upon in the middle line without dissection and the sound with the attached drainage-tube drawn through. It is not necessary to place the patient in the lithotomy position to accomplish this; the sound may be readily cut down upon after gently separating the partially flexed thighs.

The exact position of the lateral openings or drainage holes in the portion of the tube lying in the bladder is a matter of importance. They should be situated at the lowest part of the bladder and close to the little collar which projects from the tube and prevents it sliding further through the sphincter; the rent in the bladder wall can be closed round the tube now as much as possible, and if the upper end be brought out through the suprapubic opening and fixed at the right level, the complete drainage and irrigation of the bladder are well under control. (Fig. 1.)

FIG. 1.



From photograph. Showing side view of the pelvis after median section with a "through" supra- and infra-pubic drainage-tube in position. A, Apex of the prostate. B, The rectum laid open. C, Spongy urethra containing catheter. D, "Through" tube lying in the cavity of the bladder. E, Symphysis pubis.

It is also quite certain that the presence of the direct, or perineal, drain does not prejudice the healing and restoration of the natural channel of the urethra, for in a case in which the bladder was ruptured and the urethra was cut clean across in the membranous portion by the scissor-like action of the pubic bones, the perineal tube was retained with the catheter for a period of two months. The eventual condition of the urethra on complete recovery was all that could be desired; a No. 12 Jacques catheter could be passed with ease, a full-sized stream was passed at normal intervals, and the bladder was capable of retaining one and a half pints of urine.

Further, in the treatment of the ordinary form of ruptured urethra from direct violence, without fracture of the pelvis or injury to the bladder, it is very desirable—indeed, I think necessary—in order to obtain primary union of the sutured ends without contraction and eventual stricture, that the urine should be conducted externally behind the sutured portion and that no catheter or foreign body should be left traversing the sutured urethra. Union after careful coaptation should first be obtained, and then an instrument should be subsequently passed to stretch gently the urethra at the site of suture. In fact, the usual plan of suturing the urethra over a catheter which is then left in the bladder is almost sure to lead to local or urethral sepsis, and consequently union with contractile or scar tissue. If the perineal tube can be passed through a longitudinal incision into the urethra, and so into the bladder behind the line of suture, then not only is the bladder efficiently drained and the urethral canal at the sutured part cut off, but the presence of the tube in the proximal portion of the urethra fixes this part of the canal and prevents the retraction and drawing up of this portion of the tube away from the distal portion by the action of the muscles at the floor of the pelvis.

So much, then, for the direct or perineal tube; its size must be regulated by the age of the patient, and for the adult, drainage-tubing of the diameter of No. 14 or No. 16, English catheter scale, may be used.

When the time comes to discontinue the combined supra- and infra-pubic drain the tube may either be drawn within the bladder and the suprapubic opening allowed to close, or the vacuum Sprengel pump bladder-drain may be used for a time, the suprapubic opening still being retained. The pressure of the rigid silver tube with the inclosed glass tube of this apparatus, however, after a time makes the bladder very sore and is very irksome to the patient, while any attempt to attach the suction action to any soft rubber tube without a rigid outer or reservoir tube will probably be unsuccessful. The contrivance, which worked most efficiently and with greatest comfort after the discontinuance of the rigid tube, and until the suprapubic sinus leading into the bladder was so far shut off as to prevent any risk of extravasation into the pre-vesical tissues, was an improvised form of suprapubic urinal made out of an ordinary indiarubber ice-bag by cutting away a part of the front or upper surface and by passing a No. 14 empyema tube or piece of flanged india-rubber tubing through a puncture in the lower or posterior wall of the ice-bag with the flange resting securely on the inner surface. The tube with the lateral and terminal eye passes into the bladder, and the partly-covered-in ice-bag receptacle, while opposing no obstacle to the free escape of urine, keeps the patient quite dry, and if a portion of wool be placed within the bag it need only be changed twice in the night. Moreover, owing to the circular flange or rim the urine is still retained and the patient is kept dry in the sitting or upright, as well as in the lying position, and I think the same mechanism might prove useful in the case of the gall-bladder or other situations where collections of fluid require constant and not intermittent drainage.

I have already remarked that the perineal opening and the presence of the drainage-tube through the perineum do not prejudice the urethral repair in cases of ruptured urethra. No doubt after measures have been taken to drain the bladder and prevent the extravasation of urine in these cases, the next important point to be kept in mind and aimed at is the re-establishment in its entirety of the urethral canal. The sad condition of persons who after injury are victims of incurable traumatic stricture is a standing warning on this point.

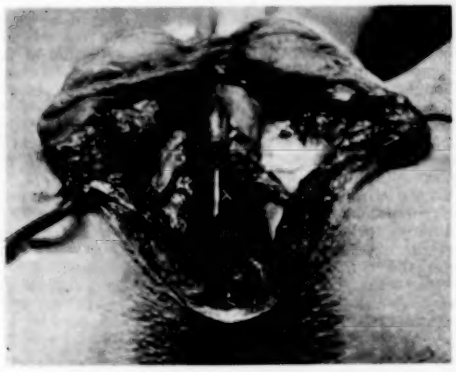
Now if the perineal drainage-tube has been passed through the perineum in the way mentioned above—namely, by passing a sound through the internal meatus and cutting down on this in the perineum and the drainage-tube drawn through—the canal is brought under control and the subsequent passage of a catheter is facilitated. It is only then necessary, when the patient's condition will allow of an attempt being made to restore the penile route, to pass a sound or silver catheter through the penis and out at the perineal wound, and attach a Jacques catheter and draw it through, and by again passing the sound through the internal meatus by way of the suprapubic opening and out at the perineum, to attach the free end of the catheter and withdraw it on the sound into the bladder. The catheter may then be left in the urethra and the perineal tube may be retained as well as long as

may be necessary. This restoration of the urethra may be done by a catheter as late as a fortnight after the injury with excellent results as far as the future urethral canal is concerned. In one case after this treatment the condition of the urethra six months after the injury is practically sound. A No. 12 Jacques catheter can be passed easily and a normal stream passed. The value of a sure guide to the ruptured proximal end is very great, and in the absence of this guide it may be impossible to pass a catheter without a prolonged perineal dissection.

Thus to recapitulate shortly the principles which should guide us in the treatment of these severe injuries I should say that if the symptoms point to an injury to the bladder in the anterior wall, an attempt should be made to close the rent in this situation in the same way that we close wounds of the posterior wall. Owing, however, to difficulties connected with the position of the wound, if at all low down, this may be impossible, in which case—and, indeed, in any case—it is essential to prevent extravasation and to drain the bladder by a perineal route. This is best done by a tube passed through the internal meatus and out at the situation of the urethral rupture if such exist. In case the condition of the patient will allow of a further attempt to restore the urethral canal by suture after perineal dissection, then the perineal tube should be brought out, if possible, through an incision in the floor of the membranous urethra behind or on the bladder side of the line of suture. If this can be done satisfactorily it is better not to leave a catheter along the whole urethral route. If the conditions will not allow of the suturing of the torn urethra at the time, then the perineal tube must be brought out through the open or torn end of the proximal urethra, and this perineal opening may be utilised at a later stage for the readier passage of a catheter along the penile urethra into the bladder. Further, careful and efficient provision should be made for the drainage of the pre-vesical space and surrounding area in view of the probable subsequent leakage of urine. If necessary, tubes should be brought out under one or both pubic rami at the perineum by cutting on a sound passed down from the suprapubic incision. In the possible event of failure to maintain complete asepsis and if subsequent suppuration follow, it may be necessary to open abscesses in the buttocks and in various situations.

One other point remains. In some cases of ruptured urethra by direct violence without fracture of the pelvis it

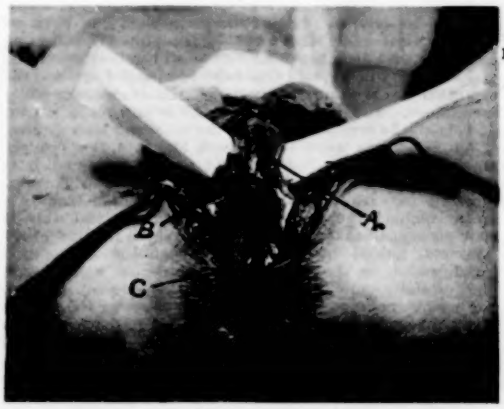
FIG. 2.



From photograph of dissection of the perineum, showing complete transverse rupture of the spongy urethra and wide separation of the ruptured ends. x shows a sound traversing the interval between the separated portions of the urethra.

sometimes happens that owing to extravasation of urine and suppuration, from delay in treatment, it is impossible to deal with the rupture by suture at the time of the patient's admission into the hospital. In such a case, after the immediate relief of the extravasation and its results by free incision and the perineal drainage of the bladder, the difficulty of the wide separation of the torn ends may be lessened later by a free detachment of the distal spongy portion together with the supporting corpora cavernosa from the front of the pubes and the partial separation of the suspensory ligament of the penis. In this way the distal ruptured end of the urethra may be brought down from one to two and a half inches, and the union of the two ends may be successfully accomplished. This liberation of the urethra with its supporting corpora cavernosa as a whole is easily and quickly done, and is far preferable to trying to detach the distal spongy urethra from its

FIG. 3.



Shows the same urethra as in Fig. 2 sutured and the ends approximated by the liberation of the distal or spongy urethra. A, Spongy urethra. B, Line of suture. C, Opening of drainage-tube passing into the bladder through an incision in the membranous urethra behind the line of the suture. D, Spatula passed under detached urethra and corpora cavernosa.

supporting structures, and will probably give that amount of increased apposition and relief of tension which may ensure satisfactory union, and if any difficulty occurs in bringing the ends of the urethra together this manœuvre should be done at once. (Figs. 2 and 3.)

Leicester

SULPHUR IN THE TREATMENT OF DYSENTERY.

BY G. E. RICHMOND, B.A., B.Sc., M.B., B.S. LOND.,
LATE OF THE IMPERIAL YEOMANRY HOSPITAL, PRETORIA.

DURING an experience of the treatment of dysentery at the Imperial Yeomanry Hospital at Deelfontein, South Africa,[1] I originally came to the conclusion that of a multitude of remedies recommended as a cure for this most rebellious complaint, ipecacuanha guarded by opium and combined with warmth and rest in bed formed the best treatment. But in some cases even when treated in this way the patients derived very little benefit and ultimately died. For example, one patient at Deelfontein, admitted as a convalescent from enteric fever, developed dysentery three or four days after his admission, and although given large (half drachm) doses of ipecacuanha every four hours on two different days, his dysentery continued, and falling into a typhoid condition with muttering delirium and constant diarrhœa and painful tenesmus, he died on the fourth day of the disease. Such a striking example of the failure of ipecacuanha naturally made one speculate on other possible remedies. The use of sulphur in dysentery was suggested on the analogy of the treatment of anthrax by sulphur, as has been advocated by Mr. Arbuthnot Lane.[2] Ipecacuanha was formerly employed locally in the treatment of anthrax, and it seemed natural to suppose that if sulphur was a more successful germicide

[1] Sulphur in the Treatment of Dysentery, THE LANCET, June 15th, 1901, p. 1676.

[2] The Medical Week, Dec., 8th, 1883. A Year's Experience of the Use of Sulphur in Surgery, Transactions of the Royal Medical and Chirurgical Society, 1895.

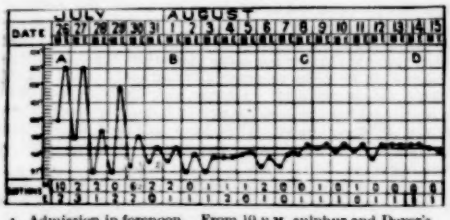
in the case of anthrax, it might probably be a correspondingly more successful treatment in dysentery. The results have justified these expectations, for in every case treated with sulphur a cure has resulted and there seemed to be little or no tendency for relapses or chronic conditions of alternating diarrhœa and constipation to occur. To the patients themselves it was a great boon, as the obstinate vomiting caused by ipecacuanha was entirely absent, nor was it at all necessary to starve them when taking sulphur as when taking ipecacuanha. Every patient was ordered farinaceous diet from the first; it is of the utmost importance that butcher's meat of all kinds should be most rigorously excluded from the diet until the diarrhœa has ceased for a week. Twenty grains of sublimed sulphur combined with five grains of Dover's powder were ordered every four hours, and from the administration of the first powder the general condition of the patient became much more comfortable; the diarrhœa and the distressing tenesmus and griping pains were greatly relieved at once, whilst the passage of blood and mucus was as a rule stopped in two days, whilst when treated with sulphate of magnesia or ipecacuanha a patient seldom owned to any amelioration of his general condition under 24 hours from the commencement of the treatment.

The detailed notes of the cases at Deelfontein are not now available, but since July 4th in the Imperial Yeomanry Hospital at Pretoria I have had under my care in a ward specially set apart for dysentery patients 11 acute cases and 10 cases of chronic diarrhœa following previous attacks of acute dysentery. All the acute cases have been treated with sulphur and Dover's powder and the chronic cases with sulphur alone, and in every instance a cure has resulted. The opium brings comfort to the patient and by its inhibitory effect upon intestinal peristalsis controls the diarrhœa and keeps the ulcerated portion of the intestine at rest, and by this means allows the antiseptic qualities of the sulphur to take effect under the most favourable circumstances. The precise mode of action of sulphur in the intestines is more or less a matter of conjecture; it is, however, reasonable to believe that sulphuretted hydrogen and other sulphur acids are formed and inhibit the growth of the micro-organism of dysentery. The amœba has been carefully searched for by Dr. J. W. Washbourn and Sergeant J. Mann, the bacteriologist at Deelfontein and Pretoria Imperial Yeomanry Hospitals, but has never been found.

It is perhaps a justifiable speculation that the dysentery of South Africa is, like the epidemic dysentery of Japan (investigated by Shiga) and the dysentery of the Philippines (Flexner), due to a specific bacillus morphologically approaching the type of the bacillus typhosus. The following cases are illustrative of acute and chronic dysentery.

CASE 1. *Acute dysentery.*—Private ——, aged 18 years, was admitted on July 26th, suffering from acute dysentery. The patient had been ill for five days with diarrhœa and for the last two days his bowels had been opened 10 times a day and the motions consisted of nothing but blood and mucus. Tenesmus was very troublesome and he complained of severe griping pains in the abdomen, especially at night. In the evening his temperature rose to 103° F., there were sordes on the lips, and he was in great distress and very feverish. His bowels were opened 12 times on the day of admission and treatment commenced at 10 P.M. (Fig. 1). On the 27th he

FIG. 1.



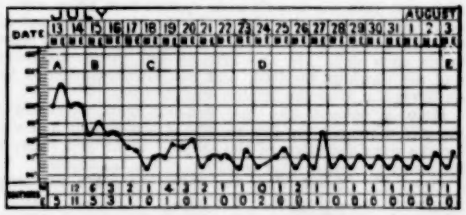
A, Admission in forenoon. From 10 P.M. sulphur and Dover's powder every four hours. B, Sulphur and Dover's powder three times a day. C, 20 grains of sulphur three times a day. D, Chicken diet, port, eggs, and custard.

was in much less pain and the tenesmus was relieved; his bowels had been opened only twice in the night of the 26th and they were opened three times during this day. His temperature again rose to 103°. On the 28th his temperature only rose to 99·2° in the evening; his bowels were opened twice during the previous night and only once in the day and no blood and mucus were passed after this morning with the exception of a trace of blood and mucus with one motion on August 1st. On the 29th his temperature again rose to 101·8° in the evening and there were six movements of the bowels in the night. After this his temperature remained normal or subnormal and he made an uninterrupted recovery.

Judging from the evening temperature and the constitutional symptoms in this case it seems probable that severe ulceration with absorption of toxic products was taking place, which was cured (in five days) by the administration of sulphur and Dover's powders every four hours.

CASE 2. *Acute dysentery.*—Private ——, aged 23 years, was admitted on July 13th. He had been ill with dysentery for three days; he had passed blood and mucus from the first, and the diarrhœa had been very frequent, his bowels being opened from 20 to 30 times a day right up to the time of admission. He complained of considerable abdominal pain and griping and was troubled with tenesmus (Fig. 2).

FIG. 2.



A, Admission in forenoon; one drachm of sulphate of magnesia every hour; plain milk. B, Sulphur and Dover's powder every four hours; farinaceous diet. C, 20 grains of sulphur twice a day. Sulphur and Dover's powder at night. D, 20 grains of sulphur three times a day. E, Chicken diet, port, eggs, and custard.

He was given one drachm of sulphate of magnesia every hour on July 13th and 14th through the day and night and plain milk diet. I saw him for the first time on the 14th, and as his last motion contained some fæcal matter the sulphate of magnesia treatment was continued. But on the 15th as the number of motions were still as many as 17 in the 24 hours and still consisted principally of blood and mucus, and as the patient still complained bitterly of the griping pains and tenesmus, it seemed advisable to change the treatment to a combination of 20 grains of sulphur and five grains of Dover's powder every four hours, and to give the usual farinaceous diet. His bowels were opened five times during the day and three times during the night and considerable relief was given to the griping and tenesmus. On the 16th the motions were chiefly fæcal, containing only traces of blood and mucus. On the 17th his bowels were opened only twice in 24 hours and contained only slight traces of blood and mucus. No blood or mucus was passed after this day and on the 19th a normally-formed motion was passed and the patient was quite comfortable. On the 24th he was ordered 20 grains of sulphur three times a day, and on August 3rd chicken diet was given and no diarrhœa resulted. On the 11th convalescent diet was taken without any untoward result.

Here a patient suffering from dysentery with very severe diarrhœa was cured of his diarrhœa in five days and the passage of blood and mucus was practically stopped in 24 hours, with the exception of the presence of *traces* of blood and mucus for two days longer. He was treated for 48 hours with sulphate of magnesia, and at the end of this time his motions still consisted principally of blood and mucus, and he had received very little relief to the pain and tenesmus.

CASE 3. *Acute dysentery.*—Private ——, aged 32 years, brother of the preceding patient, was admitted on July 13th. He had been suffering from dysentery for three days. His bowels had been opened from 20 to 30 times in 24 hours and he had passed blood and mucus from the commencement of his attack. Griping pains and tenesmus were very severe. His temperature was 99·4° F. on the 14th. Sulphur and Dover's powders were ordered every four hours. His bowels

were opened five times during the day but not at all in the night; the motions consisted of nothing but blood and mucus, except the last one, which contained fæcal matter with traces only of blood and mucus. After this he made an uninterrupted recovery, passing traces of blood and mucus for three days longer and once again on the 23rd. On the 16th 20 grains of sulphur were ordered three times a day without Dover's powder. Here the passage of blood and mucus practically ceased in 24 hours and the diarrhœa was quickly controlled. He showed no tendency to relapse when given chicken and convalescent diet.

CASE 4. *Chronic diarrhœa following acute dysentery.*—Trooper ——, aged 31 years, was admitted on June 21st. He had had two severe attacks of dysentery, the first one in February and the second in April, and since the first attack he had suffered from chronic diarrhœa. His bowels had been very irregular, he had had sometimes as many as eight or nine motions in 24 hours and often four or five motions, whilst at other times he was constipated for two whole days at a time; occasionally he passed a little mucus but no blood. He had had several kinds of treatment, including bismuth and opium, with little or no benefit. On July 12th he was given farinaceous diet and four ounces of port and 20 grains of sublimed sulphur were ordered three times a day. On the 13th and 14th his bowels were opened four times each day and three times on the 19th. On the other days and after this his bowels were quite regular, being opened once or twice each day. On the 27th he was given chicken diet and no diarrhœa resulted, and his bowels continued to be quite regular after the sulphur was omitted.

Here a patient who had suffered from dysentery and chronic diarrhœa for five months was cured in a few days by the administration of the sulphur alone and showed no tendency to relapse after cessation of the treatment.

CASE 5. *Chronic diarrhœa following acute dysentery.*—Sergeant ——, Imperial Yeomanry, aged 24 years, was admitted on July 1st. He had had a severe attack of dysentery in March—i.e., four months previously—and had suffered from dysentery and chronic diarrhœa on and off ever since. He had had different forms of treatment, but his bowels were still opened three or four times a day on an average although he was taking bismuth and opium, and sometimes as many as seven motions occurred in the 24 hours. On the 17th he was ordered 20 grains of sulphur three times a day. On the 18th his bowels were opened three times and on the 22nd five times as the result of a simple enema. On the 28th his temperature became subnormal and remained so for nine days. After the 23rd—i.e., six days after treatment began—his bowels were quite regular, being opened generally once a day and sometimes twice. He showed no tendency to relapse when given chicken and convalescent diet.

This patient had suffered from chronic diarrhœa for four months and was practically no better for the treatment which he had received, but with sulphur he was practically cured in a week.

Sulphur is from its solidity and non-absorbability an ideal intestinal antiseptic; that it passes along the whole intestinal tract is shown from the fact that it can be seen suspended as a yellow powder in watery motions. With sulphur the stools become much less offensive and no trouble arises from flatulence. Whatever is the true cause of dysentery sulphur seems capable of controlling and curing it, and it is possible that it may be found of service in cases of summer diarrhœa in England and perhaps in cases of enteric fever.

In one case of phthisis, in which the patient was admitted with (?) tuberculous ulceration of the colon following a previous attack of dysentery three months before, sulphur was given with great benefit and all abdominal pain and hyperæsthesia disappeared. The apparent success of sulphur in dysentery raises an interesting question as to the rationale of the good results attending the administration of magnesium and sodium sulphate in the early stages of dysentery. Are these results due to the purgative properties of these drugs acting as an intestinal flux and so washing away the cause of the disease and allowing nature to effect a cure? Or do they also exert an inimical action on the growth of the micro-organism owing to the presence of sulphur acids?

In conclusion, I have to thank Colonel C. R. Kilkelly, Commandant and Principal Medical Officer of the Imperial Yeomanry Hospital, Pretoria, for allowing me to collect the dysentery cases in a special ward and for giving me every facility in testing the efficacy of sulphur in the treatment of dysentery. Dr. H. D. Rolleston, consulting physician to this hospital, has always given me every encouragement and assistance that lay in his power.

THE TREATMENT OF CONGENITAL HIP DISPLACEMENT, WITH SPECIAL REFERENCE TO THE AMBULATORY METHOD.

BY H. A. REEVES, F.R.C.S. EDIN.,

SENIOR SURGEON TO THE ROYAL ORTHOPÆDIC HOSPITAL; CONSULTING SURGEON TO THE HOSPITAL FOR WOMEN, SOHO; AND FOR MANY YEARS ON THE SURGICAL STAFF OF THE LONDON HOSPITAL.

WHEN the pathological anatomy of this malformation was first described it was thought that no operation could remedy it. I am one of those still holding that view, as the specimens which I have seen in museums and those figured in books—in addition to a post-mortem examination in the case of a young man, aged 29 years, under my care at the London Hospital in which the parts were dissected by Mr. A. A. Lipscomb (the house surgeon) and myself and which is described on page 299 of my book on "Bodily Deformities"—show such conditions that the formation of anything like a competent socket in addition to the frequent presence of deformed and altered relations of the head and neck of the femur are such as to repel rather than to invite an open operation. The study of many x-ray photographs from cases under my care confirm this opinion. I have never been able to satisfy myself that any cutting procedure—except, perhaps, tenotomy of the muscles attached to and about the great trochanter and adductors—offered anything like a permanent prospect of what I should consider a practical cure or that the results could in the slightest attempt to compete with the mobility and usefulness of the limb before operation.

I have only seen three cases which have been submitted to the open operation though I am most desirous of being convinced, if possible, of its usefulness. One was seen a few months after the operation and the pain at the slightest attempt at motion was unbearable, and ankylosis seemed fairly well established. Two of these cases had been under my care and were operated on abroad. One escaped death very narrowly, but happily recovered with ankylosis and a painful limb; the other was in no way improved as to position and was much injured as to the free mobility which existed prior to the operation. These latter cases were seen about two years after the operation and they were both brought to me seeking some relief from the pain and disability. Moreover, those cases which have been shown at societies in this country after an open operation have in no way been regarded as successes. When one considers the comparatively slight disability which is common in unilateral cases—those most commonly operated upon—and that the subjects can walk, run, jump, dance, and possess all the movements of the joint except complete abduction, though they naturally tire sooner than those with normal hips, any result yet obtained by any partisan of the open method, however successful he may consider it, could not for one moment compare with the conditions of mobility and usefulness above mentioned. When one remembers that not a few deaths have occurred, it is obviously the duty of all cautious surgeons—and in dealing with life and limb surely one ought to be careful—to ponder very seriously before telling parents that by an open operation the deformity can be remedied or even substantially improved with retention of the previous mobility. Anyone keeping his eyes open can see walking about in London or any large city a considerable number of these cases. They have managed to get through life fairly well and have fortunately escaped the open operation craze.

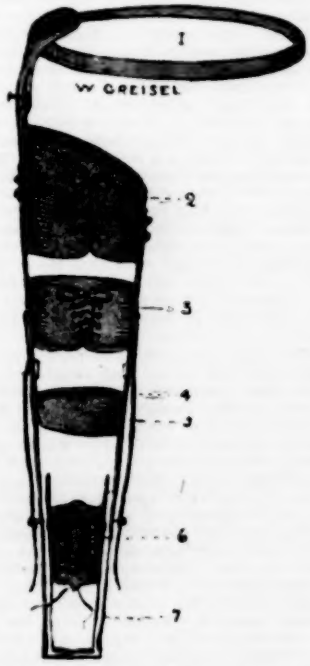
Although I have not the slightest desire, so far as my personal experience and opinion have weight, in any way to hamper any operative procedure which can be shown to be followed by anything like an adequate return for the undoubted risks run, and though I shall be ready to confess myself wrong when a sufficient number of *convincing cases* have been shown to me, at present I cannot conscientiously say that I consider the operation justifiable—i.e., I should consider myself blameworthy were I to do, or even to recommend

it, with the results such as are at present known to myself and others. It is noteworthy that one hears less about it being done in this country, and also that the German surgeons who have largely practised it have very considerably narrowed its sphere, and if one refers to modern orthopædic works and papers written by specialists of large experience, or by general surgeons, who naturally have a much more limited field, one finds that those who still practise it only in selected cases are able but to give very unsatisfactory accounts, and though one is apt to extol one's results, it is pleasant to find that English and American orthopædists make no claim to have cured the deformity and to have fully re-established the normal functions of the joint.

Now it is very easy for those who differ from me, and who wish to convert sceptics like myself, to adopt the only plan which is likely to convince. Let them have biographic films taken of their patients, walking, running, jumping, &c., before an operation, and similar ones six months, 12 months, and two years or more after it, so that the usefulness of the limb can be compared with what it was before operation and if they can show that these are anything like equal, and that the head remains firmly in the new socket, then there will be justification for it, especially if the local deformity, lordosis, waddle, &c., have been removed. In joint operations, even if one cartilaginous surface be left, ankylosis is very difficult to prevent, and though the cartilage of the femoral head is generally left intact in this operation, more or less ankylosis appears to be the usual result and displacement after the operation is not very uncommon. Having done a considerable number of arthrodeses and having had occasion to excise, partially or completely, a large number of joints in my time, this difficulty has been brought home to me, and very especially in the case of the metatarso-phalangeal joint of the great toe, and I have found that after removal of the head of the first metatarsal only, leaving the cartilage of the base of the first phalanx unharmed, firm immoveable ankylosis, apparently bony, has occurred. Every surgeon who has had much to do with joint injury and disease knows how difficult it is to restore and to keep up motion even after adhesions have been freely broken down. One has to keep on working the joint under anæsthesia and too often the patient tires sooner than the surgeon because of the pain occasioned by the passive movements necessary. In the open operation absolute asepsis cannot be guaranteed, however careful one may be, and suppuration nearly always means firm ankylosis and even something much more grave, such as excision of the joint or amputation, or even deaths, of which, unfortunately, too many have already occurred. I think it may be granted that so far as important functional results go one need not, without much more convincing evidence, say any more about the open method except that it was first performed by Karewski—not Lorenz or Hoffa—for reposition of a paralytic dislocation, and as these can usually be easily reduced I presume he wished to get ankylosis after reduction. Some operators seem to think that if they get lengthening of the limb with disappearance of the slight lordosis, ankylosis is a good result!

After having given a fair trial to the corset which was supposed to press upon the trochanters and to keep the femur down—which it never did—I became content for a time with ordering a high-soled boot; then I gave a fair trial to the method of recumbency and extension as described by the late Mr. W. Adams (formerly surgeon to the Royal Orthopædic Hospital). The long confinement to bed—usually two years—was irksome and prejudicial to the health, so that I thought out and adopted, several years ago, a method to keep the femoral head, reduced into position if possible, in place and to maintain it there, while allowing the patient to get about. I had used this instrument for about 18 months before I demonstrated it at the first meeting of the British Orthopædic Society and I believe an account of it is in the first volume of its Transactions. If I remember correctly M. M. Calot and another French surgeon were present, and many members of the society. Another fact with reference to this mode of treatment is noteworthy. Several years ago a German gentleman—whose name I forget but who came to the Royal Orthopædic Hospital—saw me reduce a case and apply the extension instrument. He said that he had been assistant to Lorenz and Hoffa, and did not approve of my plan, extolling the open method. A few weeks after this Dr. Sherman of San Francisco also visited the hospital and held similar opinions to the German gentleman; he also saw the instrument applied. This was about June and in November or early in December of the *same year* Lorenz's paper on reposition without cutting appeared. As the occurrence is remarkable it is only natural to inquire whether Lorenz's assistant wrote to him on the matter or told him when he returned. So it will be noticed that I had been practising this method for two years before Lorenz wrote about it, and that, with the difference of his using plaster-of-Paris, he did exactly what I did long before him—i.e., applied a high boot to the sound limb and allowed the patient to get about on crutches. It is also remarkable that his assistant said not a word about Lorenz having used any plan of bloodless reduction. I brought my method before the orthopædic world of this country, but I suppose that I should have written to the medical papers about it, though I am not prone to rush into print before I have given a fair trial to a plan that needs about two years' treatment.

The ambulatory method consists in first reducing, if possible, the femoral head into the deficient acetabulum by the methods of Bigelow and Paci combined, and while the limb is kept in place my extension instrument (see figure) is



The author's extension instrument. 1. Pelvic band. 2. Upper thigh-piece. 3. Lower thigh-piece, with 4, its straps. 5. Leg-band. 6. Anklet with 7, its straps.

applied. This consists of a pelvic band and a double iron, with joints at the hip and knee. The upper thigh-piece, which posteriorly has a good pillow, is pushed well up to the perineum, then the lower thigh-piece is laced to the thigh and so subsequently is the ankle. Extension is first applied from the anklet and its straps are fastened. Further extension is provided for through the thigh-piece. The joint at the hip permits of fixation in abduction if felt to be necessary, and the joint at the knee is provided with a back-stop in order that the joint may be moved a little daily so as to avoid physiological ankylosis. The patient wears a patten, or high-soled boot, on the sound limb and goes about on crutches. At the back of the heel the ankle-piece must be watched so as to prevent excoriation. The patient wears a shoe or slipper and to prevent the toes dropping forward a broad ribbon is passed underneath the front of the foot and attached to the tibial band of the instrument. Occasional readjustment about every two months may be necessary, and the thigh and calf muscles can be massaged during the treatment if the thigh-pieces be loosened, but the ankle extension should not be disturbed without great necessity. I do not profess to succeed in reducing all cases into the rudimentary

acetabulum, but I have contented myself with converting iliac displacements into the anterior dorsal or supra-cotyloid. This considerably diminishes the shortening and lordosis and improves the walk. I have treated a considerable number of cases, some double, but mostly single, in this way and am very satisfied with the results, as also have been the parents. I explain to them frankly what I propose to do and how much I expect to result, and as a rule I can conscientiously say that I have not been seriously disappointed. Some of these cases have been seen by my colleagues who have been good enough to testify to considerable improvement.

I must confess that I am sceptical as to the claims of those who state that by this bloodless method they get perfect results. I could, if necessary, give chapter and verse for three cases which were said to have been reduced. They were put up in plaster and so treated for a considerable time, but when the children began to walk the parents noticed no improvement, and hence I came to see these cases, and in each instance there was anterior dislocation—i.e., the usual form of this deformity. I do not think that it could be claimed for these cases that a posterior displacement had been converted into an anterior, because the latter is by far the more common in my experience, and also because the walk after the treatment was similar to that before it, according to the parents' statement. Therefore, before becoming convinced of the permanence of this method, I should require similar tests to those I have indicated when speaking of the open operation, and though I shall not cease trying to reduce these cases into the rudimentary acetabulum, and to keep the head there if I can, still I shall not expect anyone to believe that I get results any better than those I have pointed out until I can rigidly demonstrate the fact up to and after three years from the reduction of the deformity. If it be thought that I am too exacting, I can only reply that these are the tests which I should set myself, and that I never perform a serious operation without first asking myself whether I would do so on my own child or near relative, and with this operative canon I shall rest content.

At a meeting of the British Orthopædic Society a few years ago I stated that I had thought out a method by which the results of the open operation might be improved. This consisted in drilling a hole through the head and upper part of the neck of the femur and into the hollow of the acetabulum, through which a steel or ivory rod could be placed, but I pointed out that as there was so little bony tissue in the latter place (in fact, that it was mainly cartilage), and as perforation of the pelvis probably could not be avoided the risks might be great, especially if suppuration occurred, and, moreover, that ankylosis would be likely to result. Displacement would most likely take place when the rod was withdrawn and if the head still remained in position this would be due to ankylosis. This, I take it, is the real explanation of most cases in which the head is stated to remain in place after the open operation. Enough, I hope, has been said to show that the results claimed require very careful sifting in the best interests of orthopædic surgery before one is justified in opening—or, to use a German expression, *insulting*—these misplaced, but otherwise very serviceable, joints.

Grosvenor-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF EXTENSIVE SUBPERIOSTEAL HÆMORRHAGE IN A CHILD THREE WEEKS OLD.

BY A. C. INGRAM, M.R.C.S. ENG., L.R.C.P. LOND.,
HOUSE SURGEON, MILLER HOSPITAL, GREENWICH

ON May 29th a female child just three weeks old was brought to the Miller Hospital, Greenwich, with the history that up to May 25th she had been perfectly well, but from the 25th to the 28th she appeared to be fretful and ailing. On May 28th her right ankle became swollen and purple in colour "as if it had been severely bruised." On admission the patient was found to be a well-developed child, but had a peculiar yellow, waxy appearance of the skin and looked very ill. The umbilicus had not completely healed, being covered by a scab, the removal of which displayed a granulating surface. On the right ankle there was an extensive subcutaneous hæmorrhage surmounted by a bulla containing sanious fluid. There was a similar hæmorrhage over the right elbow. The whole of the right leg and the lower half of the right thigh were of a dirty yellowish colour and uniformly swollen. This swelling was firm and brawny to the touch, closely resembling the condition of the limbs sometimes found in scurvy rickets. The child died at 10 P.M. on the same evening, the swelling and discolouration having extended up the right thigh and on to the abdominal wall on that side.

At the necropsy, made on the 30th, it was found that the whole of the muscles of the right thigh and leg were infiltrated with sanious fluid. The right tibia and fibula were separated from the periosteum throughout their diaphyses by a collection of similar fluid so that the whole diaphysis of the tibia was pulled out without much difficulty. The lower ends of the right femur and humerus were similarly affected. At the fifth left costo-chondral articulation the rib for a distance of one inch was carious and surrounded by a quantity of thick sanious pus. There was a small hæmorrhage into the liver and another into the left lung. There were minute vegetations on the margins of the cusps of the mitral valve. No thrombosed veins or other evidence of infection could be found in the neighbourhood of the umbilicus.

In conclusion, I have to thank Mr. C. H. Hartt, under whose care the patient was, for permission to publish these notes.

Greenwich, S.E.

ANOTHER RAPID CASE OF DIABETES.

BY J. B. EMMERSON, M.D. DURH., M.R.C.S. ENG.

ON Nov. 4th a boy, aged 13 years, was brought to me complaining of thirst and weakness. His breath had a chloroform smell and the urine had a specific gravity of 1030 and was full of sugar. His mother said that he had only been ill for a fortnight and he had walked four miles to see me. He was put upon a strict regimen but sank and died on the 9th, five days afterwards. Curiously enough, the lad came from close to Ashwell, from which place Mr. R. E. H. Woodforde reported a case in THE LANCET of Nov. 2nd, p. 1192.

Probably these cases are not uncommon and have been running on for a considerable time unsuspected.

Biggleswade.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—On Nov. 15th a meeting was held in the library of the London Hospital (by kind permission of the Visiting Committee) under the auspices of this association. About 80 students were present. Professor G. Sims Woodhead presided. Dr. J. J. Ridge introduced a discussion on the Advantages of Total Abstinence. He advocated it on the ground that it was a more absolute and necessary safeguard against the evils of intemperance than vaccination was against small-pox. He quoted the late Sir Andrew Clark, who had said, "It is when I think of all this [the effects of the abuse of alcohol] that I am disposed ..... to give up my profession, to give up everything, and to go forth upon a holy crusade preaching to all men, Beware of this enemy of the race." He pointed out the physical advantages of total abstinence as regards athletics and examinations, and showed from the results of friendly societies and life offices that abstainers had on the average less disease and longer life. They were all total abstainers from something or other, such as opium; he considered there was greater reason to abstain from alcoholic drink as a beverage. The question of alcohol as a medicine was foreign to the subject. Some objected to take the pledge, but they did not require it as a condition of membership, although he supposed they all looked forward to signing the Hippocratic pledge after passing the conjoint examination. Several students and others took part in the discussion.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF CHRONIC INTESTINAL OBSTRUCTION; COLOTOMY; SUBSEQUENT CLOSURE OF ARTIFICIAL ANUS; RECOVERY.

(Under the care of Dr. S. J. SHARKEY and Mr. W. H. BATTLE.)

THE average duration of life after colotomy for malignant disease of the sigmoid flexure or rectum is probably not more than 18 months,[1] while Maylard [2] considers that the duration is less than a year. In the following case the patient has survived nearly three years, and the obstruction caused by the disease has completely disappeared. These facts would tend of themselves to suggest a doubt as to the diagnosis, but a few cases of the disappearance of a new growth of the lower bowel have previously been reported. It is very desirable that the further history of the case should be followed up.

A man, aged 49 years, was admitted into St. Thomas's Hospital under the care of Dr. Sharkey on Jan. 17th, 1899, with symptoms of intestinal obstruction. He stated that he had been in good health until Jan. 1st when he had pain in the lower abdomen with constipation. Purgatives were given, but there was no effect until an enema had been given by the medical attendant. Since that time there had been continued enlargement of the abdomen, irregular action of the bowels after medicine, and lately some vomiting. On admission the patient was found to be a stoutly built, well-nourished man. He complained of abdominal pain, had a distended abdomen, tympanitic excepting in the flanks, where there was some dulness. He had offensive vomiting and some diarrhœa with passage of mucus. Nothing could be felt per rectum. There was a history of both alcohol and syphilis.

On the following day Mr. Battle was requested to see the man with a view to operation as the obstruction was supposed to be mechanical, probably malignant stricture. An exploratory incision was first made in the middle line below the umbilicus and the point of obstruction was found in the sigmoid flexure. The large intestine above was thickened and much distended. A lump was felt in the bowel which involved the wall of the gut and bound it down to the pelvic brim; some coils of small intestine were adherent to this lump which was quite immoveable. Incision was then made in the left inguinal region and the descending colon was brought out. A fishgut suture was passed across the mesocolon from one edge of the wound to the other, close to the bowel and at the junction of the lower one-third with the upper two-thirds. A silk stitch was then passed at both the upper and lower angles of the wound, which passed through and held the bowel in position. The colon was then opened, a Paul's tube being secured in the opening. On the fourth day the tube was removed. There is nothing further to be said about the progress of the case and on Feb. 15th the patient was discharged wearing a colotomy belt.

As there was some uncertainty regarding the nature of the obstruction, it was decided to explore again, with the intention of excising it if possible. The patient was readmitted to hospital on June 3rd, 1899, and a median section was performed through the old scar on the following day. The growth was found to be smaller than at the previous operation, but it was very fixed to the pelvic brim and the intestines were still adherent. The incision was therefore closed and he was advised to put up with the inconvenience of the artificial anus.

The patient was seen at the hospital at frequent intervals and always expressed anxiety to have something done to close the opening in his side, but was told that nothing could be done. In the early part of this year he came with the information that since Christmas, 1900, fæces had begun to pass by the rectum. When this first happened he had severe pain lasting two hours. Now the fæces passed both ways. He was readmitted on April 17th, 1901. His general health was good and he had put on more flesh, had no pain and considered himself quite well excepting for the artificial anus. He was kept under observation until April 26th, on which date Mr. Battle explored again through the scar in the median line. Exploration was the more readily undertaken as there had developed a hernia in this situation. There were more adhesions present, one coil of bowel was fixed to the posterior aspect of the scar, and the adhesions which were in the neighbourhood of the swelling were so numerous that it was not possible to define its outline or even to say if it retained its former size or shape. This wound was sutured in layers and reinforcing sutures (all of silk) were put in, but the muscles were fatty and would not hold stitches. During the operation the artificial anus was plugged and isolated.

Until May 30th the patient was kept quiet in bed and the spur of the artificial anus was destroyed by means of the pressure of the apparatus devised by Mr. Battle for use in such cases. The artificial anus was situated on the left side between the umbilicus and the anterior superior spine, and occupied the centre of a hernial protrusion which had apparently resulted in consequence of the increasing abdominal pressure from deposit of fat in the omentum; also there had been slight suppuration with the formation of weak scar tissue, and the opening in the muscular wall was larger than was now necessary as the distension of the bowel at the first operation was considerable and it was difficult to get the large bowel through a smaller incision. The bowel opening was plugged with gauze and then the peritoneum was opened, the incision being carried all round on the right side to free the bowel from the peritoneum which was attached to scar tissue. The margin of this was cut away to show the layers of the wall. On the outer side it was not necessary to open the peritoneum. All scar tissue was cut from the surface of the bowel excepting for a ridge immediately surrounding the opening, and this formed a strong line for the insertion of a row of continuous silk sutures. A second row of sutures (interrupted, Lembert's method) was then placed and the opening was completely turned in. The area of operation was then washed with warm saline solution and the external wound was closed as well as possible with silk sutures. The muscles were very degenerate and would not hold any stitches when marked traction was put on them to bring the edges of the wound closely together.

Rectal feeding was employed for four days. The wound was dressed on the eighth day and some of the stitches were removed. There was a slight amount of suppuration. On the fourteenth day the bowels were opened by enema and on the seventeenth by aperient. On the fortieth day the patient was discharged wearing an abdominal belt, and both of the wounds were almost healed. There had been no escape of fæcal matter from the wound. The bowels acted well and regularly. He has resumed his ordinary work and is fat and well. This patient was shown at the Medical Society of London on Nov. 11th.

Remarks by Mr. BATTLE.—The opinion formed at the first on this patient's case was that he had a stricture of the large bowel due to malignant growth (cylindroma). At the operation a lump was found, but it was not possible to satisfy myself that it was malignant, more especially as the small intestine was adherent to it, a rare occurrence in malignant cases. The question of malignancy is not yet decided, for the malignant growth most frequently met with in the bowel is not of a very malignant type and, provided that the obstruction which it causes is relieved, then the patient may live for many years. The fat, well-nourished appearance of this man does not suggest malignant disease, especially as he has a good colour and continues to put on weight, but I would not lay too much stress on this point. The spur of the artificial anus was acting well, so that it remains somewhat of a puzzle to understand by what route the fæces reached the rectum. It is possible that the stricture gave after the long rest, but the result of the operation which presumably causes the fæces to pass again over it, continues good, and I have no knowledge of such improvement in similar cases; or perhaps there is some anastomosis established between the bowel above and below. With the history of syphilis it is

[1] Jacobsen: Operations of Surgery, third edition, p. 1085.
[2] The Surgery of the Alimentary Canal, p. 472.

possible there is a gummatous infiltration of the wall of the bowel. I have found the T-shaped apparatus for removal of the spur more successful than any other method. The application of forceps causes much pain to the patient, is slow in progress, and is followed by much thickening of the tissues about the spur, and the part divided by the forceps cicatrises and contracts, so that but little good is effected. The use of tubing, as recommended by Sir William M. Banks, is useful in some cases, but there is more disturbance caused by the introduction of the tubing of required size; it is more difficult to keep in place and is more readily blocked by fæces. The slim arm of the T causes no obstruction, its introduction is easy, and pressure on the long arm is easily regulated by the bandage which encircles the patient and holds the dressing in position. It is cheap and can be made by anyone out of a piece of firewood, some silk, and rubber tubing of small size.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

THREE CASES OF BASAL DRAINAGE OF THE ARACHNOID FOR THE RELIEF OF INTRACRANIAL PRESSURE.

(Under the care of Dr. E. DEANESLY.)

THE probable cause of the accumulation of cerebro-spinal fluid in the ventricles is blocking of the foramen of Magendie in the roof of the fourth ventricle. This foramen may be obstructed by the effusion of lymph, as in tuberculous meningitis, or by pressure from a tumour or abscess of the cerebellum. The method of removal of this excess of fluid by the introduction of a curved probe under the cerebellum was well described by Dr. A. Parkin in THE LANCET[1] in 1893. The figure there given renders the operation clear.

CASE 1.—A boy, aged 14 years, was admitted into the Wolverhampton and Staffordshire General Hospital, under the care of Dr. J. A. Codd, on March 9th, 1900, complaining of severe headache. He had measles two years previously and afterwards had a slight discharge of matter from both ears. This left him a little deaf on the right side. About the beginning of February, 1900, he was taken ill with pain in the head and back of the neck. He was ill at home for five weeks with pain and sickness and was treated for influenza. On March 9th he was seen by Dr. Codd who found intense double optic neuritis. Vision, however, was not noticeably impaired; there was no ataxia, ocular palsy, or any focal symptom. There was still a little purulent discharge in the left meatus. He was admitted and treated with large doses of potassium iodide. The headache improved and the vomiting, which had never been frequent or typically "cerebral," ceased. He was sent home and attended as an out-patient. The headache reappeared as badly as ever and on May 31st he was readmitted to the surgical ward. He was a bright, intelligent lad with rather prominent eyes. The optic neuritis was still intense, but there were no localising symptoms of any kind and the pulse was not abnormally slow. Beyond a small perforation in the left Shrapnel's membrane there was no sign of old or recent otitis. He was, however, slightly deaf in the right ear. In the absence of localising symptoms a provisional diagnosis of cerebellar tumour was made and it was decided to trephine the posterior fossa in order to examine the cerebellum, to relieve the intracranial tension, and to prevent the danger of optic atrophy and blindness. The possibility of cerebellar abscess from otitis, although this appeared very improbable, together with the complete absence of localising symptoms, led to the selection of the left side for trephining because the traces of past otitis seemed more evident on that side. A curved flap was turned down and a three-quarter inch trephine opening was made a little to the left of the middle line immediately below the lateral sinus. On incising the dura mater the cerebellum bulged through and pulsated very faintly. No sign of abscess or tumour was detected. A curved director was passed beneath the cerebellum in the direction of the fourth ventricle for over an inch but no fluid escaped. Two silk drains were then passed some distance beneath the cerebellum and brought out one at each angle of the scalp wound, which was closed without replacing the bone or suturing the dura mater. Headache was at once relieved by the operation. A little serous discharge escaped from one angle of the wound when dressed on the eighth day. The following day both drains were removed and the wound had healed. On the twelfth day the patient got up but vomited on returning to bed. On that date the neuritis was already observed to be less. 22 days after the operation it had almost cleared up, but the upper inner quadrants were still indistinct. He returned home four weeks after the operation. Headache soon returned but now in severe paroxysms, not continuously as before. The slight bulging through the trephine opening present when he was discharged increased till it projected nearly an inch above the general surface of the scalp. This swelling was partly reducible and felt like fluid. The paroxysms of headache were relieved by antipyrin and gradually ceased. Four months after the operation the swelling had almost gone and the lad returned to work as an errand boy. On Dec. 12th, 1900, the boy was examined again. There was then no sign of past neuritis in either eye and no atrophy, but he thought that sight was not quite so good as formerly. He was well and free from symptoms. The swelling over the trephine opening was variable: at this date it was about one and a half inches in diameter and about three-quarters of an inch high. At present (September, 1901) he continues well and at work.

CASE 2.—A man, aged 30 years, was admitted to hospital on April 16th, 1901. He had suffered for the past nine months from pains in the head and partial deafness in the left ear. There was a possible history of syphilis three or four years before, and he had been treated for his headache with mercury and iodide without any effect. On admission he was a strongly built man of healthy appearance. His head was somewhat large, with prominent, overhanging forehead. The pain in the head was chiefly frontal, worse on the left side. It was made worse by use of the eyes, and he complained that his sight was somewhat indistinct. There was marked nystagmus of both eyes on looking either to the right or the left, but no squint, ocular or pupillary paralysis, or inequality of pupils. There were intense double optic neuritis and swelling of the discs. Both tympanic membranes were normal, but there was distinct impairment of hearing on the left side, apparently nervous or labyrinthine in origin. He complained of numbness of the right side of the cheek over an area which was marked out and found to include the greater part of the cheek, on the right side together with the whole of the upper lip and the upper half of the lower lip on both sides, so that a complete zone encircled the mouth. This area was found to be partially insensitive to touch, and the anæsthesia affected the corresponding areas of mucous membrane within the mouth. He complained of some difficulty of articulation, but his speech was not noticeably indistinct. There was no paralysis of the face, jaws, tongue, pharynx, or larynx. He was able to stand still with the eyes closed, but on walking staggered first to one side and then to the other. He had also subjective feelings of giddiness, but was not intelligent enough to give a clear account of his sensations. There was marked incoördination of both hands, the finger being placed several inches wide of the nose when seeking the latter with the eyes closed. Both knee-jerks were much exaggerated, but no ankle clonus was obtained. The urine was normal, as were the thoracic and abdominal viscera. The pulse was not abnormally slow. The temperature varied between 97° and 98·4°F. It was clear that there was increased intracranial tension and that the morbid process involved cranial nerves on both sides of the brain at the base. Tumour of the cerebellum involving the middle lobe and encroaching on the pons seemed to be the most probable diagnosis.

At the operation the posterior fossa was opened with a one-inch trephine on the right side Hæmorrhage from the veins was profuse and difficult to check. After incising the dura mater the cerebellum bulged into the aperture without pulsation. There was no sign of tumour visible. The bony opening was enlarged as much as possible in all directions in order to relieve tension permanently. A curved blunt elevator was passed inwards beneath the cerebellum towards the fourth ventricle but no fluid was reached. A silk drain was inserted in the same position and the wound was closed. The dura mater was not sutured. On the same evening the temperature rose to 99°, the pulse to 96, and the respirations to 24. The following day he vomited persistently. The speech (articulation) was very indistinct and slow, like that of bulbar paralysis. There was, however, no weakness or deviation of the tongue. The silk drain was removed on the second day, but on the day after there was a profuse discharge of

[1] THE LANCET, July 1st, 1893, p. 21.

cerebro-spinal fluid from the wound which continued for four weeks, at first sufficient to soak through the dressings and to saturate the pillow-case, afterwards diminishing, and finally ceasing. The wound was healed and the scalp sutures were removed at the end of a week, but the cerebro-spinal fluid continued to drain from a small sinus left by the silk. This finally closed on May 31st. On the tenth day the temperature rose from its previous level of from 97° to 99° to 103° and then gradually subsided to its normal course. This corresponded to a temporary partial cessation of flow of cerebro-spinal fluid and the fall of temperature was accompanied by a resumed profuse flow. The patient was at once relieved of headache and of the numbness of the face by the operation, but in other respects his condition was distinctly worse. His speech was slow and indistinct, and he was for a long time so weak in the trunk and limbs that he was unable to sit up in bed or to feed himself without assistance. This condition slowly improved. Seven weeks after the operation he was able to stand with a little help and he was allowed to go home. The optic neuritis at this time had entirely subsided. At the time of writing (four months after the operation) he is in good general health and free from pain. His speech is slow, jerky, and indistinct, but less so than it was. His sight is rather dim, but the nystagmus has disappeared. He is able to stand while holding a table and thinks he is getting stronger. He walks when supported with an extremely spastic gait, lifting the feet very high at each step. The knee-jerks are still most exaggerated. There is no sign of bulging over the trephine opening, only the usual pulsation.

CASE 3.—A lad, aged 18 years, was admitted to hospital on June 26th, 1901. For some five months before this his parents had noticed that his gait was peculiar and that he sometimes complained of headache and giddiness. He had not, however, had any severe illness or had he to absent himself from his work. On June 14th at 5.45 P.M. he was suddenly seized with acute pain in the head. He left his work, went home, and vomited. On the next day the pain continued and he vomited again. He was then seen by a medical man who found him in bed with a temperature of 102·4° F., marked retraction of the head, stiffness of the neck, and a pulse which was slow in proportion to the temperature. There was much photophobia and the bowels were costive. Other signs were negative. He remained for 10 days in much the same condition, the pain being unrelieved by purgation, ice-caps, and leeches. On admission he was curled up in bed, lying indifferently on either side. He was quite conscious and intelligent, as he had been throughout. The pain was continuous, with paroxysmal exacerbations; it began in the occipital region and worked round to the left mastoid region. There was no sign of otitis, present or past, on either side. The temperature was 102·6° and the pulse was 60. The head was retracted and very stiff. He was held in sitting posture with difficulty in order to examine the eyes. Marked double optic neuritis was found, but no tubercles were seen in the choroid. There was no squint, inequality of pupils, or ocular paralysis, but marked photophobia was present. The cranial nerves were unaffected. There had been no local spasms or general convulsions. Both knee-jerks were exaggerated, but there was no loss of power in either limb. The thoracic and abdominal viscera appeared to be normal. The urine contained no albumin. The red blood corpuscles and hæmoglobin were normal; the leucocytes numbered 18,400.

On the day after admission the left occipital bone was exposed below the lateral sinus as close to the middle line as possible and an opening into the posterior fossa made with a gouge and afterwards enlarged with forceps to the diameter of half an inch. The dura mater was incised and a curved elevator was passed beneath the cerebellum into the fourth ventricle. There was a gush of about an ounce of clear fluid and the cerebellum, which was previously protruded and motionless, immediately sank within the skull and pulsated normally. The pulse momentarily slowed down, but soon rose again to 72. Respiration was unaffected. A drain of silkworm-gut strands was passed into the arachnoid space for about an inch and brought out at one angle of the wound, which was otherwise completely closed. Two and a half hours later the boy was free from headache but the head was still retracted. Convalescence was rapid, but the temperature varied daily between 98° and 104° F. for four days and did not reach the normal level till the ninth day. It then continued normal. The pulse frequency remained subnormal for over a fortnight, but the other symptoms gradually subsided. The wound healed by primary union and the drain was removed at the end of a week. No fluid appeared to have drained by it after the first 24 hours. The optic neuritis subsided slowly. A month after the operation the discs were still swollen and indistinct; a fortnight later they had somewhat improved. The lad got up at the end of three weeks and returned home a few days later. When last seen, a month later, he was apparently in good health and free from all signs of his illness except the scar on his head and the still present but subsiding optic neuritis. The cerebro-spinal fluid removed at the operation was examined by the Clinical Research Association for the diplococcus intracellularis with negative result.

Remarks by Dr. DEANESLY.—The exact nature of the intracranial mischief in the above cases is still uncertain. Possibly the subsequent history may throw more light on that point, although two at least of them appear to be completely restored to health. Whatever differences may have existed in the nature of the primary lesion all three cases agreed in presenting some or all of the signs and symptoms of increased intracranial pressure—viz., severe headache, vomiting, double optic neuritis, slow pulse, and respiration, and few or no localising signs. The operation of basal drainage of the arachnoid introduced by Mr. A. C. Morton and Mr. A. Parkin is admirably adapted for the relief of intracranial pressure in such cases and numerous successful instances of its application have now been recorded both by Mr. A. Parkin and others. In two of the present cases the operation may be claimed to have relieved dangerous symptoms and probably to have averted death. In the other case (Case 2) success in relieving the intolerable headache was qualified by increase of the muscular weakness and of the defect of speech; but the ultimate result cannot yet be predicted.

A comparison of the three cases will perhaps help to elucidate the probable nature of the lesion in each. In Case 1 the operation gave positive evidence of increased intracranial pressure, but no evidence that it was associated with, or produced by, any excess of cerebro-spinal fluid. It is possible, however, that the fourth ventricle was not actually reached by the probe, for the trephine opening was placed over the anterior part of the cerebellar hemisphere, from which position the fourth ventricle, unless greatly distended, is much less easy to reach than when the trephine opening is near the median line. Nevertheless, the removal of bone and section of the dura mater sufficed to bring about a gradual cessation of the symptoms, and it is not improbable that the case was really one of chronic internal hydrocephalus dependent on some blocking of the natural channels by which the cerebro-spinal fluid is distributed or reabsorbed. On the other hand, such obstruction may have been due to a small basal tumour pressing on the veins of Galen, which may have become quiescent since the operation. I have indeed seen a case in which a small tuberculous tumour in that position with hardly any localising symptoms became quiescent under medical treatment for two years. Symptoms then recurred, the child died, and the previous diagnosis was verified at the necropsy.

In the second case, as in the first, attention at the operation was primarily directed to the cerebellum, and the trephine opening was nearer to the side of the cerebellum than to the posterior middle line. Perhaps it was for this reason that, although great increase of intracranial pressure was verified, no fluid was struck on passing a director beneath the cerebellum. It is probable that the fourth ventricle was not reached, for on the third day a profuse flow of cerebro-spinal fluid appeared suddenly and continued for four weeks.

In other respects this case presents striking points of resemblance to a case of hydrocephalus cured by opening the fourth ventricle and reported in THE LANCET of Nov. 2nd, 1895 (p. 1106), by Mr. Thelwall Thomas of Liverpool. This case was that of a young man, aged 18 years, with a large head, who had had attacks of severe headache with giddiness for 18 months. He had double optic neuritis, nystagmus, deafness without middle-ear disease, a staggering gait, and incoördination of the hands; later he developed paralysis of the fourth nerve. The temperature was subnormal. In all these points the case closely resembled Case 2. At the operation, as in Mr. Thomas's case, the venous hæmorrhage was very profuse. The results of the operation in Mr. Thomas's case were much more satisfactory

than in my own, for at the end of nine weeks recovery was practically complete, whereas in Case 2, although still slowly improving, there are still great defect of articulation and a pronounced spastic gait. In this case there is no doubt that the difficulty of speech and the general muscular weakness were in some way immediately and greatly increased by the operation, possibly by direct injury of the pons and pyramidal tracts, although it is difficult to imagine how an injury to the bulb or pons could have been limited to the centres or tracts affected. In spite of the points of resemblance to Mr. Thomas's case it is possible that the internal hydrocephalus is secondary to tumour and that the relief given by the operation will not be permanent.

Case 3 is in some respects the most satisfactory. Whatever the cause of the morbid condition it was, both in its onset and course, acute. Clinically it resembled a case of acute meningitis, either simple or tuberculous. Examination of the fluid removed failed to confirm either of these diagnoses, but too much stress must not be laid on a negative report. At any rate, clinically the case was not only acute and severe, as shown by the symptoms and the high temperature, but it was watched for 10 days without any sign of amelioration. Although cases of recovery from such symptoms and even from undoubted meningitis are not unknown I think that in the present case recovery was at least improbable without operation. The effects of the operation were certainly striking. Relief was immediate, convalescence was rapid, and recovery was apparently complete.

I have to thank Mr. H. D. O'Sullivan and Dr. S. Southall, house surgeons to the hospital, for notes of the cases, and Mr. W. S. Robinson for the accurate history of Case 3 before admission to the hospital.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Relation of Danysz's Bacillus to Gaertner's Bacillus.—The Immunisation of Cattle against Bacillus Tuberculosis.—A Case of Infection of Bacillus Coli Communis with Endocarditis.—A Case of Gangrene of the Nose associated with Bacillus Pyocyaneus.—A New Centrifuge for Bacteriological Work.

A MEETING of this society was held on Nov. 19th, Mr. WATSON CHEYNE, the President, being in the chair.

Dr. E. E. KLEIN, in a communication on the Relation of Danysz's Bacillus to Gaertner's Bacillus, drew attention to the difficulties and insufficiency of the methods in use for differentiating the various species of microbes belonging to the group of coli bacilli. He illustrated this by comparing two such species which from their widely-separated derivation could hardly be considered the same—viz., the Danysz rat bacillus and the Gaertner bacillus enteritidis. In morphological and cultural respects both these species belonged to the coli group, and while they differed from the typical bacillus coli communis in some points they showed great similarity in precisely the same points; further, in respect of pathogenicity on rodents they had much in common. Moreover, an animal (guinea-pig) protected against one microbe appeared to be likewise protected against the other microbe, and finally the blood of an animal (guinea-pig) protected against one, agglutinated an emulsion not only of this but also of the other microbe.—Professor J. MCFADYEAN asked why Dr. Klein hesitated to regard these organisms as being identical, as the only difference was one of situation.—Mr. A. G. R. FOULERTON said that he saw no reason why the Gaertner bacillus and the bacillus above described should not be identical.

Professor MCFADYEAN brought before the society the results of some experiments in which an attempt had been made to Immunise Animals of the Bovine Species against Tuberculosis. To this end cattle were infected with intravenous injections of virulent tubercle bacilli and after an interval tested with tuberculin. It was pretty confidently expected that the ultimate and not very long deferred result of such experiments would be the death of the animals from tuberculosis, and when very large doses of virulent bacillus were used this was what actually happened. In some instances, however, the experimental animals never developed any decided symptoms of infection and gradually ceased to react to tuberculin. This, of course, might have been the result of a different degree of natural immunity or it might have been brought about by a curative property of tuberculin. The experiments showed that cattle might possess or might have conferred on them a very high degree of immunity against tuberculosis. Professor McFadyean gave the details of the experiments and then discussed the question whether the results could reasonably be attributed to a high natural immunity against tuberculosis. He said that the question might be asked, Were the results attributable to a high natural immunity of the experimental animals or to an immunising effect of the treatment to which they were subjected? Putting aside the evidence afforded by the control experiments with cattle it scarcely seemed open to doubt that the immunity was now far higher than it was originally. The degree of natural immunity against tuberculosis possessed by cattle varied a good deal from individual to individual, and probably it was sometimes so strong that it would enable an animal to resist inoculation with a moderate number of virulent bacilli; but nothing that was known made it at all likely that any bovine animal was naturally so immune that it could resist inoculation with the colossal numbers of virulent bacilli that were used in some of these experiments, and even if it were held that some individuals of that kind did exist it was not reasonable to suppose that four animals selected at random for the experiment all possessed this very high degree of natural immunity. Assuming, therefore, that these cattle had actually been immunised against tubercle bacilli the next question to present itself was, What was the mechanism by which the immunity was brought about? Was it the tuberculin or the interaction between the bacilli and the animal cells? In Cases 1 and 2 the first intravenous inoculation was made with a very large number of virulent mammalian bacilli—such a number as would almost certainly have caused the death of any ordinary animal, and yet no serious effect was produced. But both these animals had been previously treated with tuberculin and both were the subjects of naturally contracted tuberculosis before the treatment was begun. Probably in these cases the immunity which the animal had acquired at the time of the first inoculation was due to their previous reactions to tuberculin, and since then it had been greatly strengthened by the later intravenous injections. It was therefore probable that the interaction between the bacilli and the animal cells, aided by the tuberculin injections, gave them a higher power of resistance than they originally possessed.—The PRESIDENT said that there was no evidence to show that any immunity could be produced in the human subject by tuberculin. He had always regarded the action of tuberculin on man as a purely inflammatory effect.—Professor MCFADYEAN, in reply to a question whether he had obtained the same immunity with mallein, said that the natural process of recovery from glanders was common in horses which were well kept. Horses treated with large doses of mallein undoubtedly withstood large doses of glanders.

Dr. F. W. ANDREWES communicated a case of Malignant Endocarditis due to Bacillus Coli Communis. He exhibited a heart, sections of the vegetations, and a number of bacterial cultures from the case. The patient was a boy, aged 12 years. The total duration of his illness was four months, during the last two of which he was under observation in St. Bartholomew's Hospital. The onset of his illness was insidious and there was no evidence as to the primary channel of infection. The symptoms were typical of malignant endocarditis and included a mitral systolic murmur, severe remittent and intermittent fever, an enlarged spleen, and embolism of the brachial and other arteries. There was a leucocytosis of 29,000 a short time before death. At the necropsy the heart, which weighed only nine ounces, showed fatty degeneration and a curious endocarditis of the mitral valve which presented numerous firm rounded vegetations of pale yellow colour and of the consistency of herrings' roe. Emboli were present in the brachial and femoral arteries and a large suppurating infarct in the spleen had caused a localised perisplenic abscess. The cardiac vegetations and spleen showed large numbers of a bacillus resembling bacillus coli communis which was easily isolated in almost pure culture from both sources. In the vegetations the bacilli formed a strange mycelial brushwork at the periphery, chains of organisms being densely set at right angles with the free surface. The bacillus was feebly motile and was manifestly a variety of bacillus coli communis. It did not stain by Gram's method;

it grew on gelatin like that organism, without liquefaction; it formed a brownish layer on potato; it produced abundant gas in glucose gelatin shake cultures and vigorously reduced neutral red. Milk was not clotted till the fourth day and no indol formation was observed. Strangely enough no pathogenic effects could be produced on animals by inoculation with recent cultures. The case was a pathological rarity, though not unique, as a few similar cases had been recorded.—Mr. W. C. C. PAKES asked whether the same organisms were present in the emboli as had been found in the valves of the heart.—Mr. S. G. SHATTOCK asked if the primary lesion had been carefully searched for and especially whether the appendix had been carefully examined.—Dr. W. BULLOCH asked how long after death the necropsy had been performed and suggested that it might be post-mortem infection.—Professor MCFADYEAN compared the condition to that found in pigs in which endocarditis developed in swine fever. In these cases, when the pigs came under observation, no lesion could be found in the intestine, though there was little doubt that that was the origin of infection.—Dr. ANDREWES, in reply, said he thought that the lymph on the outer side of the bacilli in the valves of the heart proved that the condition could not have been a post-mortem infection.

Dr. DAVID NABARRO read a paper on a case of Gangrene of the Nose associated with the Bacillus Pyocyaneus. The patient was a boy, aged three and a half years. His mother had noticed swelling of the alæ nasi and on the following day the inflammation had spread up the nose. Two days later the tip had ulcerated away. On admission to the hospital two days later the child's general condition was bad. Locally there was a black slough, of about the size of a shilling, affecting the septum nasi, the upper part of the lip, and both nostrils. Mr. F. C. Abbott dissected away the slough and the surrounding inflammatory area. The child recovered well and the nose rapidly healed. The examination of the tissue removed showed on longitudinal section a necrotic part in the centre with a slough on the surface and a part of the cartilage of the alæ nasi in the interior, separated by a groove of the living tissue on either side. Sections stained for micro-organisms showed many streptococci stained by the Gram-eosin method. A few were apparently capsulated and lancet-shaped, suggestive of the pneumococcus of Fraenkel. The cocci were limited to the edge of the slough and to the area round the nasal cartilage. In sections stained by methylene blue many more organisms were present than in the Gram sections, the increase being due entirely to the presence of a large number of bacilli, some long and slender, others short and thick, scattered about in groups throughout a large part of the necrotic area. On bacteriological examination streptococci and the bacillus pyocyaneus were proved to be present. It was difficult to decide which was the actual cause of the gangrene, but for several reasons Dr. Nabarro was inclined to think that the bacillus pyocyaneus had played the most important part in the production of the gangrene. He arrived at this conclusion for the following reasons: in the first place, the inoculation into the guinea-pig showed that the bacillus was possessed of a high degree of virulence and had produced such potent poisons that the animal died in 12 hours; secondly, the cocci were most abundant along the edge of the gangrenous area, whereas the whole of the necrosed tissue was pervaded with the bacillus; and thirdly, infection with streptococci was not at all uncommon, but a condition of rapid death of tissue such as was seen in this patient was unusual and might be presumed to be due to an unusual cause, and infection with bacillus pyocyaneus would be such an unusual cause. It was possible that the origin of the condition was twofold, the streptococci causing the rapid spread of the inflammatory process, whilst the rapid necrosis and sloughing were due to the action of the powerful toxins elaborated by the bacillus pyocyaneus.—Mr. PAKES doubted whether the fact that the bacillus pyocyaneus could not be recovered from the heart's blood of the guinea-pig experimentally killed proved that the condition was a toxæmia and not a septicæmia.—Dr. BULLOCH stated that it was most difficult to find the bacillus pyocyaneus in animals which had been killed by an injection of this bacillus and he was of the opinion that such a negative result did not prove that the condition was a toxæmic one.

Dr. J. W. H. EYRE showed a new Centrifuge for Bacteriological Work.

HUNTERIAN SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held on Oct. 23rd, Dr. DUNDAS GRANT, the President, being in the chair.

Dr. F. J. SMITH showed a case of Congenital Pulmonary Systolic Bruit. The patient was a man, aged 38 years, who from babyhood upwards was known to have had something wrong with his heart. On examination he presented no, or very little, cyanosis, but his fingers were very clubbed. There was a typical rough, loud systolic bruit to be heard over the pulmonary area conducted upwards; there were also very evident signs of tubercle of the lungs with bacilli in the sputum. Dr. Smith remarked that the diagnosis scarcely admitted of doubt and only drew attention to the comparatively late period at which the tuberculosis had supervened.

Dr. SMITH also showed a case of Enlarged Glands of the Neck. The patient was a man, aged 50 years, who for the last four years had noticed that the glands of his neck were gradually getting larger and larger, and that he himself was getting weaker and weaker. He had no specific complaint of pain or local illness to make, but simply of malaise and weakness. On examination it was found that the glands in both cervical triangles in both axillæ and on the front of the chest were much increased in evidence—i.e., much larger, harder, and apparently increased in number; those of the groin were quite natural. The individual glands could easily be felt; there was no periadenitis with matting of the structures. His other organs were found to be perfectly normal so far as physical examination could show, and the urine was quite natural. The blood showed under the microscope no pathological changes, but there was a reduction in hæmoglobin percentage, the change of simple anæmia. Dr. Smith, in discussing the diagnosis, excluded (1) leucocythæmia, by the quality of the blood; (2) Hodgkin's disease, by the fact that neither liver nor spleen was to be felt; (3) malignant deposits of a secondary type or sarcoma of glands, by the duration of the case; (4) tuberculosis, by the isolation and non-breaking down of the glands; and finally decided that it was a case of simple hypertrophy, and drew attention to the distribution of the affection, it being confined entirely to the glands above the diaphragm. Dr. Smith had had a gland removed and was waiting for a microscopical report.

Dr. SMITH also showed a case of Multiple Attacks of Ascites. The patient was a man, aged 29 years, with the following history. He was healthy enough till he was about six years of age, when he had an attack of stomach trouble in which, as far as could be ascertained, the abdomen swelled in precisely the same way as during the later attacks. He was put to bed for a few weeks and then he recovered. He remained well for some three or four years when he was again attacked by a similar illness; he again recovered in a few weeks, and the attacks and recoveries, each about six or eight in number, had been repeated pretty regularly every few years down to 1901. His recoveries had been so complete that he had done a lot of hard exercise, being particularly fond of rowing. In the spring of 1901 he began with his present attack, but as it did not disappear within about the customary period he applied for hospital treatment and was admitted under Dr. Smith's care. On admission his thoracic organs were found to be apparently perfectly healthy, as was also his nervous system. The abdomen was noted to be very large, and examination showed that this was due to ascites, and fluid was present to such an extent that no precise examination of individual organs was possible; the legs were slightly œdematous, but the urine was perfectly natural in quantity and quality. An exploratory laparotomy was advised and consented to, but owing to various circumstances there was a delay of some weeks and by the time there was a chance of having it done the condition was found to be improving so much that he was discharged without anything being done and apparently nearly restored to health. When exhibited (some six weeks after discharge) the patient was seen to be a particularly healthy man. The abdomen showed that there was still some fluid, but it could be so far explored as to show that neither liver nor spleen was enlarged and that there were no lumps to be felt anywhere, though there was a general doughy feeling about the abdomen; the veins of the parietes were not visibly enlarged, but the skin over them was a little œdematous, as were also the legs.

In speaking of the diagnosis Dr. Smith said that he had never seen a case at all similar, as he knew of no cause for ascites which could give the curious relapses here presented; but, taking all things into consideration, he was inclined to believe that the case was probably at bottom of a tuberculous nature, either tuberculous peritonitis or old tuberculous glands causing some relapsing obstruction. He regretted the absence of a specimen of the fluid, as he thought that it might possibly be of a chylous nature. Should the patient have another definite attack he should advise laparotomy at once with a view of clearing up the diagnosis and probably curing the patient.

Dr. J. H. SEQUEIRA showed an unusual case of Rodent Ulcer in a woman, aged 52 years. The disease began 12 years ago with the formation of a small nodule on the left cheek near the lower eyelid. Ulceration followed and spread over the upper part of the cheek and on to the forehead and scalp. Later the root of the nose was involved and the disease spread to the right side of the forehead and the upper part of the right cheek. The contents of the left orbit had almost entirely disappeared and the inner canthus of the right eye was now involved. The interest of the case lay in the large area affected, the superficial character of the lesion in its greater part, and the fact that quite two-thirds of the parts involved had undergone spontaneous healing, leaving a fine white scar. The left side of the forehead and the root of the nose were still ulcerated, but were rapidly improving under the x rays. The margin everywhere showed the raised beaded edge characteristic of rodent ulcer. In many respects the case resembled one figured by Dr. Radcliffe Crocker in his Atlas (Plate lxxvi., Fig. 3).

Dr. DAVID ROSS showed (1) some Milky Ascitic Fluid taken from a patient who had since died from cancer of the pancreas; and (2) a patient who had been operated upon for Myeloid Sarcoma of the Fibula.

Dr. SEQUEIRA, Dr. T. GLOVER LYON, Dr. R. HINGSTON FOX, Dr. DAVID ROSS, Mr. J. H. TARGETT, and the PRESIDENT discussed the cases.

LIVERPOOL MEDICAL INSTITUTION.

A New Lamp for Use in the Treatment of Lupus.—Malarial Poisoning.—External Pharyngo-œsophagotomy in Traumatic Stricture in the Upper End of the Œsophagus.—Myiasis.

THE second ordinary meeting of the session was held on Nov. 7th, Mr. EDGAR A. BROWNE, the President, being in the chair.

Dr. G. STOPFORD TAYLOR showed a new Lamp for the Treatment of Lupus, diagrams of which have already appeared in THE LANCET. After entering into an explanation of its construction and management he said that success was only to be obtained by practice.—Dr. LESLIE ROBERTS said that he was using Dr. John Hunter's arc lamp in the treatment of lupus. If the new lamp was theoretically as active as the original Finsen apparatus he thought that it would not be long before it would become obsolete. His experience was too recent to speak as to results, but he desired to warn members against being too optimistic. In properly selected cases he had seen the light treatment give wonderful cosmetic results, but the cure was slow and tedious. He thought that they should not rely solely on any one measure in the treatment of lupus. There were many cases in which it would be better to begin with the cautery and to complete the case with the arc lamp. Time alone could fix the real worth of the lamp treatment.—Dr. A. S. F. GRUNBAUM described Bang's new lamp which he had seen working at Hamburg. Its chief features were great portability and cheapness. It had cooled iron electrodes which gave many more ultra-violet rays than carbon.—Dr. TAYLOR replied that the idea of metal carbons was impracticable because the intense heat of the "arc" would convert them into a liquid state. He had not yet met with a case of lupus to which he had not been able to apply the lamp satisfactorily.

Mr. R. W. MURRAY related a Complicated Case of Malarial Poisoning. The patient, a man, aged 20 years, contracted malaria two and a half years ago during a voyage up the Amazon. He was treated in a New York hospital on account of high fever and blood in the urine, and during his stay of 10 months in this hospital he had had the right kidney, the vermiform appendix, and the general peritoneal cavity explored, and the bladder drained from the perineum. He returned to Liverpool and remained in good health until August, 1900, when he was admitted to the Northern Hospital suffering from high fever and blood in the urine, from which hospital he was discharged at his own request at the end of five days, although his temperature was 104° F. The urine contained a large quantity of blood, and the malarial parasite was present in the blood. He was re-admitted in January, 1901, and had remained in hospital ever since. During this time the temperature had averaged 102°, rarely falling to normal, and occasionally rising to 106°. Repeated examinations of the blood had again failed to reveal the malarial parasite. A cystoscopic examination of the bladder was made and an ulcer was seen close to the right ureter; the bladder was opened and the ulcer was treated with nitrate of silver. The hæmaturia then ceased for some time, but returned later and was accompanied by great abdominal pain, referred to the right side, and with violent attacks of vomiting. As the case could not now be considered one of malaria, in September the right kidney was explored and was found to be apparently healthy. During the last month the patient had improved, though the temperature remained high and there was blood in the urine. Numerous drugs, including tannin, arsenic, iron, and opium, had been tried without any apparent benefit.—Major R. ROSS said that the detailed temperature chart was not that of a case in which malaria was the only cause of the fever. The chart showed a continuous fever. He had no doubt that malarial parasites were present, but he thought that some other cause was producing the long-continued elevation of temperature. The blood in the urine was not due to hæmaglobinuria. The spleen was not enlarged.—Dr. GRUNBAUM inquired whether a differential blood count had been made and whether the quinine had increased the apparent hæmaturia; hæmoglobinuria might have existed together with the latter.

Mr. W. THELWALL THOMAS showed a patient upon whom he had performed External Pharyngo-œsophagotomy for Traumatic Stricture in the Upper End of the Œsophagus, caused by accidentally swallowing fuming nitric acid. Some months after the accident it was impossible to pass bougies. On exposing the stricture by external incision it was found to be so small as only to admit a fine probe. The cicatricial tissue was divided on a fine probe director. Excision was impossible and transverse suture was not feasible, so suturing was resorted to over an œsophageal tube passed through the mouth, continuous through the mucous membrane, puckering it up over the stricture, while Cushing's suture was employed for the muscular coats of the œsophagus. The patient, a youth aged 17 years, made a good recovery, and now (seven months after operation) he could swallow solid food and a full-sized bougie could be easily passed.—Mr. F. T. PAUL said that traumatic strictures of the œsophagus were uncommon and were rarely so favourably situated for operation as in Mr. Thomas's patient. He recognised the difficulties of a plastic operation owing to the fixation of the tube at this point; but evidently enough had been done to render subsequent complete dilatation an easy matter.

Dr. D. M. HUTTON read a paper on Myiasis, dealing with the not uncommon occurrence of myiasis in this country and the singular paucity of English literature on the subject as compared with that written by continental authors. Myiasis was defined as the accidental parasitism of dipterous larvæ—i.e., maggots of flies—and was classified according to the distribution of the maggots in the gastro-intestinal tract, the skin, in wounds, and in the nose and ear. Five typical cases of intestinal myiasis were related, two occurring in Dr. Hutton's own practice. Speaking of the etiology, the opportunities for invasion by the ingestion of the eggs of flies in uncooked vegetables, tainted meat, &c., were dwelt upon, and the wonderful resisting powers of maggots to toxic agents and unfavourable conditions of life generally were commented upon. Evidence was given that the eggs or larvæ for the most part perished in the alimentary tract and that the reason of their survival in the known cases was as yet unsolved. The remainder of the paper was devoted to the symptoms and treatment of the condition and with the better known cutaneous myiasis—viz., myiasis vulnerum and narium.—Major R. ROSS related some cases of myiasis of wounds which he had seen in India. He thought that the nervous effects so distinctly produced in some of the intestinal cases

were instructive in reference to the similar effect of intestinal worms.—Dr. HUBERT ARMSTONG mentioned a case of intestinal myiasis due to a maggot about an inch in length (name unknown). A purge failed to reveal any further specimens and there had been practically no symptoms.—Dr. JOHN HAY asked if the symptoms produced were due to mechanical irritation or to toxic absorption of poisons produced by the larvæ in the intestine. In helminthiasis definite blood-changes had been described, showing that there was probably a toxic agent in addition to the mechanical irritation.—Mr. KELLETT SMITH and Dr. B. SUMNER also spoke and Dr. HUTTON replied.

The Pathological and Microscopical Section.

The first meeting of the Pathological and Microscopical Section was held at the Institution on Nov. 14th, Dr. J. HILL ABRAM being in the chair.

After the exhibition of a good many interesting specimens the CHAIRMAN opened a discussion upon Some Points in Cardiac Pathology in which Dr. F. R. GLYNN, Dr. W. CARTER, Mr. CATON, Mr. RENDLE, and Professor C. S. SHERRINGTON took part.

Dr. GRÜNBAUM gave a demonstration of the Near Relation of the Anthropoid Apes to Man as shown by the Biological Blood Test.

EDINBURGH OBSTETRICAL SOCIETY.

Valedictory Address.—The Nature of the Tubercle Blood Mole.—Election of Office-bearers.

A MEETING of this society was held on Nov. 13th, Dr. R. MILNE MURRAY, the President, being in the chair.

The PRESIDENT gave his Valedictory Address. He first referred in a sympathetic manner to the losses caused by death to the society during the past year. Dr. Apostoli of Paris was specially known by his electrical treatment of fibroids. He believed that his work had suffered from the exaggerated mode of expression in the writings of his students. The great advance in the operative treatment of fibroids through the abdomen had displaced the electrical treatment, but he believed that there was still a sphere for it among those women who would not run the risk of operation. He referred to the loss sustained by the profession in the death of Sir W. O. Priestley who had an Edinburgh association by his assistantship with Sir James Y. Simpson. Amongst others Dr. James Foulis, Dr. J. Connel, Dr. George Elder, and Dr. William Husband, and their work were also commented on. He then directed attention to the teaching of midwifery and gynæcology, and referred to the melancholy fact that the puerperal mortality from septicæmia had not diminished during the past 50 years. The results of private practice fell short of the best hospital practice mainly because there was far too much meddlesome interference with a natural process, and even when interference was indicated it was often carried out with a total disregard of those principles which had been the basis of the triumphs of modern surgery in other departments. The wide persistence of these vices of practice must be due to some radical defect in the teaching of obstetrics in their schools. As the subject was dealt with in all their Scottish, and in most of their English, schools it fell into two sections—midwifery which dealt with the normal function and abnormal manifestations of the reproductive process, and gynæcology which dealt with the diseases and disorders of the reproductive organs. Until comparatively recently the first department absorbed almost all their attention; their knowledge of the diseases of the female reproductive organs was very limited and their diagnosis unsatisfactory, and even more restricted was their power of treating them. During the last quarter of a century great advances in pathological knowledge, and even more so in abdominal surgery, had raised the study of gynæcological diseases to be one of the most important in practical medicine. So much advance had been made that the time placed at their disposal in the curriculum was becoming more and more inadequate for a reasonable consideration of the full scope of their subject. The increasing importance of gynæcology tended either to displace obstetrics from its former position of pre eminent importance or, on the other hand, there was the danger that the pressing claims of scientific and practical obstetrics prevented anything like an adequate consideration of the immense advances which recent gynæcology had achieved. It seemed necessary, therefore, that some rearrangement of the work which teachers were required to overtake must be made, the subjects of gynæcology and obstetrics being dealt with in different courses. Some teachers, who were specially interested in other departments, considered that far too much time was devoted to the study of obstetrics and that half of the time could be applied to the necessary expansion of the teaching of gynæcology. These teachers considered that it was absurd that what they designated as the limited subject of midwifery should occupy the same length of time as a subject like general medicine or surgery, which was expected to be overtaken in 100 lectures. Most students took two courses in these latter subjects and even then they found that a large part of their working knowledge had to be obtained from text-books; and most teachers, who confined their prelections to the limits of a single course, restricted themselves to an exposition of the principles of their subject as a whole and a detailed account of one or more departments of it. If a young practitioner was possessed of a sound knowledge of the principles which underlay the scientific practice of medicine and surgery and a reasonable knowledge of the details of the diagnosis and treatment of the more common and urgent maladies he was sufficiently equipped for entering on the work of his profession as far as these subjects were concerned. He was not likely to commit any irreparable blunder in dealing with them or one which he could not rectify by the knowledge obtained by the consultation of authorities on the subject. But in the department of obstetrics the case was materially different. The processes of pregnancy, parturition, and the puerperium were in the majority of cases perfectly natural functions and required no interference or management in the strictest sense of the term. But in a very considerable minority of cases the process departed from the normal and became pathological in the highest degree. Thus two lives became suddenly jeopardised and one of them, if immediately saved, was exposed to the risk of permanent damage and depreciation. They might consider for an instant some of the complications which the ordinary obstetrical practitioner might at any moment be called upon to meet, such as hæmorrhage (accidental, unavoidable, post-partum, or occurring during an abortion), eclampsia, transverse and face presentations, impacted breech cases, rupture of the uterus, hydrocephalus, and prolapse of the cord. Conditions such as these could not be managed on general principles and the practitioner must be prepared to treat them by himself and at once. There was seldom time to consult books or to seek the aid of men of more experience or resource. In a case of post-partum hæmorrhage, for instance, there was no time to send for a consultant; the patient might be dead before he arrived unless the flow was stopped. The greater part of the work of general practitioners was concerned with the ailments of women and children, and the greater part of a woman's troubles sprang from, or was concerned with, her organs of reproduction. So the most important part of the equipment of the general practitioner was a sound knowledge of the principles and practice of obstetrics and the elements of gynæcology; his reputation would often be made or marred by his success or failure in this department. In teaching the students these subjects he (the President) would confine the course of midwifery to a careful review of the whole subject of obstetrics and that of the simpler modes of gynæcological diagnosis and the elementary study of the diseases of women, and he would transfer the subject of gynæcology outside this, including pelvic and abdominal surgery, to a special course, on the same lines as diseases of the eye usually were dealt with at present. This rearrangement meant a new chair and more money, but that should be no insuperable obstacle. The systematic course was only one part; not less essential was the practical training which was necessary to enable the student to apply with success the results of his systematic knowledge. Before he could present himself for a degree he must show certificates of having either attended 12 cases of labour on his own account or that he had managed six cases of labour and had attended the practice of a maternity hospital for three months. He did not learn much from the former alternative. He might arrive after the event was completed, and even if present at them all he had not seen any of them conducted by anyone more competent than himself. He had never been shown how to prepare a patient for examination, far less how or when to examine; he had not even been shown how

to wash his hands. The latter alternative of following the practice of a maternity hospital with the management of six cases was the wiser choice. During the visits of the students to the hospital they could be given practical knowledge of the diagnosis of pregnancy and the prognosis of labour so far as that condition depended on the presentation and position of the fœtus and on the character of the pelvis and other maternal conditions. The phenomena of the puerperium and its abnormalities, the uterine involution, and the process of lactation could all be considered. But many students might have attended a whole course in the hospital and have never seen a single case of labour managed within its walls, not one occurring on the day and at the hour of the clinique. Not one in ten had seen the forceps applied, and fewer still had seen any of the other obstetric manipulations or operations. Such a course of clinical midwifery seemed lamentably inadequate. The first necessity in providing a remedy for this state of affairs was a students' residence close to the hospital so that they might be readily summoned whenever a case was in progress. A competent and permanent resident physician should be appointed who would teach the senior students and take full charge of the medical direction of the hospital in the absence of the honorary staff. A junior resident would take supervision of the outdoor cases. Such a scheme might be considered by some as suggested wholly in the interest of the students and that the real purpose of the hospital, the succour of women in labour, was made secondary to this. But experience had shown that everything which tended to improve the teaching efficiency of any hospital tended directly to the benefit of the patients treated there.

Dr. D. BERRY HART then read a paper on the Nature of the Tuberose Blood Mole (Fleshy Mole; Subchorial Tuberose Hæmatoma). The clinical features were indicated—viz., amenorrhœa for from two to three months, then a threatened abortion which passed off. The uterus did not grow, however, and the mole was expelled a varying number of months afterwards. The characteristics of the expelled mass were then described and special attention was drawn to the finger-tip processes lying beneath the amniotic surface. The mole, on section, showed the following structures: amnion, chorion, the intervillous spaces, the subchorionic processes filled with organising blood-clot, and a thin layer of serotina. Dr. Hart demonstrated that he had found in the serotinal boundary of the mole thrombosis of the blood-vessels, a condition not previously described. He drew attention to the serotinal septa joining the chorion and serotina, and he finally urged that the engorgement of the maternal circulation distended the spaces, except where they were tacked down by the septa already mentioned. The bulging of the chorion and amnion at these points gave the characteristic subchorial projections. The changes in the fœtus were secondary. (Microscopical specimens demonstrating the various points were shown.)—The paper was discussed by Dr. J. RITCHIE, Professor A. R. SIMPSON, Dr. MILNE MURRAY, Dr. F. W. N. HAULTAIN, and Dr. W. FORDYCE.

The following were elected office-bearers for the ensuing session:—President: Dr. James Ritchie. Vice-Presidents: Senior, Dr. F. W. N. Haultain; Junior, Dr. James Haig Ferguson. Treasurer: Dr. William Craig. Secretaries: Dr. W. Fordyce and Dr. J. Lamond Lackie. Librarian: Dr. F. W. N. Haultain. Editor of Transactions: Dr. J. Lamond Lackie. Members of Council: Professor A. R. Simpson, Dr. J. W. Ballantyne, Dr. G. P. Boddie, Dr. S. Macvie (Chirnside), Dr. R. Milne Murray, Dr. D. Berry Hart, Dr. N. T. Brewis, and Dr. R. C. Buist (Dundee).

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—An ordinary meeting of this society was held on Nov. 15th, Mr. Robert Jones (Liverpool) occupying the chair.—Dr. David Walsh showed a girl, aged 14 years, with a Tumour in the Left Flank diagnosed as Hydronephrosis. An x-ray examination of the case appeared to show a small calculus impacted in the ureter near the bladder and also a hydronephrosis shadow.—Mr. R. Clement Lucas suggested that before operation was resorted to the patient should be examined per vaginam under a general anæsthetic.—Mr. Sydney Stephenson exhibited a child, aged 17 months, who was suffering from Acute Miliary Tuberculosis with pulmonary and cerebral manifestations. Double optic papillitis existed and a typical tubercle was present in the choroid coat of the right eye. There was, in addition, a tuberculous ulcer involving the palpebral conjunctiva of one eye. The ulcer (in scrapings from which tubercle bacilli had been demonstrated) had destroyed a portion of the free edge of the eyelid and was not associated with granulations.—Mr. George Pernet thought that the conjunctival ulceration corresponded to the miliary tuberculous ulcer occurring sometimes about the edges of the lip.—Dr. C. O. Hawthorne remarked that the optic discs were considerably swollen and suggested that the papillitis might possibly be due to a tuberculous intracranial tumour and not to tuberculous meningitis.—Dr. Hawthorne showed a boy, six years of age, with considerable Enlargement of the Lymphatic Glands of the Neck, with a similar but less marked condition of the axillary glands. The blood showed no excess of white corpuscles, but a relative increase of lymphocytes. He considered the case to be one of Hodgkin's disease.—Dr. A. E. Sansom asked whether the spleen was enlarged.—Dr. R. Hutchison suggested that the case was one of tuberculous glands. He doubted whether there was really such an affection as Hodgkin's disease.—Mr. Pernet and Mr. Clement Lucas also discussed the case.—Dr. Hawthorne, in reply, said that the lower end of the spleen could just be felt. He pointed out that the glands were not matted together and that their characteristics were different from those of tuberculous glands.—Dr. G. A. Sutherland and Mr. J. Jackson Clarke showed a child, aged two years, with Marked Shortening of all the Limbs, Six Digits on each Hand, Slight Hare-lip, and Congenital Heart Disease. They suggested that an achondroplasic condition was present.—The case was discussed by Dr. Hutchison, Mr. Pernet, and Dr. G. E. Shuttleworth.—Dr. Sutherland briefly replied.—Dr. Edmund Cautley showed a Heart from a patient, aged 15 years, who died from Pulmonary Regurgitation. The specimen weighed 11 ounces and was "firm and globular." The right ventricle was markedly hypertrophied. The pulmonary valves were much thickened and puckered and on two of them were warty vegetations with apparent loss of substance.—Dr. Theodore Fisher (Clifton) thought that the case was one of infective endocarditis—a view shared by Dr. Sansom.—Dr. Cautley replied.—Mr. W. Gifford Nash (Bedford) showed the Kidneys from two children of the same family whose ages were six months and 10 weeks respectively. The kidneys were the seat of congenital cystic degeneration and the enlargement in each case was noticed shortly after birth.—Dr. Fisher inquired whether it was common for children with congenital cystic kidneys to live weeks or months.—Mr. Nash, in reply, said that there were instances on record of such patients surviving to 20 or 30 years of age.—Mr. J. Howson Ray (Manchester) showed specimens and a sketch illustrating a case of Congenital Umbilical Hernia of the size of a fœtal head occurring in the Children's Hospital, Manchester.—Dr. Cautley read a paper on the Etiology and Morbid Anatomy of Tuberculous Meningitis, based upon the post-mortem and clinical records of the last 27 fatal cases under his care. 22 cases occurred in children under five years of age, and only five during the next five years of life. A family predisposition existed in five cases. In two instances only was disease limited to the meninges. In 23 cases the mediastinal glands were caseous, and in four of these the mesenteric glands were also affected. Dr. Cautley summed up his views shortly as follows. Inheritance meant exposure to infection, injury was rarely an exciting or predisposing cause, and the respiratory tract was the great channel of infection; the alimentary tract was rarely primarily infected. Tuberculous milk was rarely, if ever, the source of infection. The prognosis was very hopeless on account of the extent of the tuberculous disease elsewhere.—The paper was discussed by Dr. Sutherland, Dr. Fisher, and Dr. Willmer Phillips.

SOCIETY OF ANÆSTHETISTS.—At the opening meeting of the session of this society held on Nov. 1st Mr. Walter Tyrrell, the President, chose as the subject of his inaugural address, "The Dosage of Anæsthetics considered from a Clinical Standpoint," the dosage of chloroform vapour receiving the chief and most important notice. The President reviewed the more usual methods of administration and severely criticised those methods which had for their object haste. He disapproved entirely of those methods in which large quantities of chloroform were administered suddenly, and emphasised his view that anæsthesia should be gradually induced by the aid of carefully graduated and evenly increasing doses; he admitted that gradual administration

had certain dangers that were peculiar to it, but considered that the evils of rapid induction by overwhelming and suddenly administered doses were more to be dreaded. Mr. Tyrrell considered that the chief dangers to be feared from slow administration were vomiting and syncope, but that these symptoms could be overcome if noticed early by cautiously pressing the anæsthetic. In the opinion of the President vomiting and syncope could only be avoided by a complete control of the vapour used and no one volumetric solution could give that control. The President discussed at some length the practice of Surgeon-Colonel Lawrie who advocated "commencing with a vapour as strong as can be inhaled." He considered this to be a dangerous process and one not suited to the climate of England.—In the discussion that followed Dr. Garner referred to the work of the Hyderabad Commission and gave some interesting details of Dr. Lawrie's methods of procedure. He (Dr. Garner) thought that the teaching of Surgeon-Colonel Lawrie was similar to that of the Society of Anæsthetists. With regard to the struggling of the patient he respectfully differed from the President; he would not push the chloroform when the patient was beginning to vomit or becoming sick. In India the surgeon had to attend to the anæsthetic as well as to the operation.—Dr. J. F. W. Silk said that he had not much to criticise in the President's address. He considered that an inaugural address by a new President was an excellent innovation and one that he hoped would be followed on future occasions. He (Dr. Silk) preferred to begin with a small but increasing dose of the anæsthetic; he did not approve of the plan of commencing with a drachm or half a drachm or of making the strength of the vapour just sufficient for the patient to breathe. In cases of struggling he preferred, unless the breathing was absolutely restricted, to continue the administration, allowing plenty of air. He thought struggling a dangerous period, and the sooner it was got over the better. He did not consider that sickness during administration ought to occur and when it did occur it was due either to idiosyncrasy on the part of the patient or to some miscalculation on the part of the administrator.—Mr. W. E. Burton quoted a case in which a powerful and well-developed man, in a series of six operations, was invariably sick throughout the administration, even when it was conducted by an expert administrator.—Mrs. Dickinson Berry said that sickness was more commonly found in adults than in children and that this pointed to the existence of a neurotic element.—Dr. Dudley W. Buxton thought that children were extremely liable to vomit from fear, particularly in hospitals. He considered that neurotic persons were more liable to vomit than others in consequence of their secreting and swallowing a greater amount of saliva mixed with chloroform. It seemed to him that dosage was a question for the administrator and also for the method. An ignorant man might achieve success with a faulty method because he was careful; ignorance combined with skill did not justify the use of a bad method.—Mr. Walter Edmunds exhibited a Stationary Apparatus for Administering Chloroform Vapour Mixed with Air, the apparatus somewhat resembling Junker's adaptation of the wash-bottle with Richardson's bellows. In Mr. Edmunds's apparatus the supply of air driven through the liquid chloroform was obtained from a gasometer, the gasometer being filled with air at the commencement of the administration, the pressure of the air passing through the fluid being controlled by loading the cylinder of the gasometer with sandbags of various weights. The supply of chloroform was continuous, the strength of the dose being regulated by varying the distance at which the face-piece was held from the patient's face. Mr. Edmunds used paper face-pieces of an inexpensive pattern, so that they could be thrown away as soon as used.—The meeting concluded with a vote of thanks to Mr. Tyrrell for his presidential address.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 14th, Dr. Clifford Beale being in the chair, when the following cases were shown.—Mr. H. S. Elworthy showed an infant, 11 weeks old, who had been recently vaccinated and who was suffering from a rash which had come on a few days after vaccination. The child had been perfectly well since birth with the exception of a mild degree of dyspepsia. The vaccination had been typical and of moderate severity, the scabs being still visible on the arm. A few days after vaccination the mother noticed a rash which came out chiefly upon the arms, the lower parts of the legs, and the face. The type of eruption was a red infiltrated papule which extended peripherally and in some cases developed a small central vesicle resembling the lesion seen in herpes iris. Itching was a marked feature, but the child's health was entirely unaffected.—Dr. A. Morison showed a woman suffering from a Peculiar Form of Paresis of the Muscles supplied by the Left Ulnar Nerve. The history of the patient was that she had had acute rheumatism at 15 years of age, being left with a slight mitral insufficiency as the result. Six years ago she had had a severe attack of pneumonia and the present paralysis had then developed rapidly, accompanied by a good deal of pain. The paralysis had improved slightly, but the muscles had undergone considerable wasting, those chiefly affected being the inter-ossei, volar muscles, and the adductors and extensors of the wrist. He referred to Dr. Auld's experiments with pneumococcic toxin on rabbits in which a somewhat similar paralysis had been produced in these animals, and gave it as his opinion that the disease was a peripheral neuritis due to pneumococcic toxin.—Dr. A. H. Robinson showed: 1. A man of late middle age with an Inguinal Tumour. The tumour was said to have occurred suddenly with sharp pain on rising quickly out of a chair two months previously. It was as large as a fist, lobular and fluctuating, giving a marked impulse on coughing. When the patient was put in a supine position it could be slowly but almost completely reduced, and when fluctuation was felt for in the abdomen a slow wave could be felt passing from the groin up to the psoas muscle. He thought that the tumour was a psoas abscess, though he could find no definite evidence of tuberculosis of the spine. (The other members present agreed with the diagnosis.) 2. A girl suffering from Ulceration and a thickened mass in the left deltoid which he considered to be a gummatous myositis.—Dr. A. Whitfield showed a girl, aged 17 years, suffering from a Symmetrical Eruption on the extensor surfaces of both forearms. The eruption was of two years' duration and caused moderate itching. The lesions were horny plugging of the hair follicles, some inflammatory papules round these, and in some cases indolent pustules. No true molluscous tumours were present. The occupation of the patient was brushmaking and necessitated the arms being constantly splashed with oil which came from the machine. It was doubtful what was the nature of this oil, but it was probably either a heavy petroleum oil or a mixture of this with some animal or vegetable oil. The eruptions due to paraffin and its allies were well known and were akin to those produced by tar. The case shown resembled in many of its points the chronic tar eruptions.—Mr. Mower White showed a specimen comprising the Centre of the Jaw and the Anterior Part of the Tongue, removed on account of an Epithelioma of the Floor of the Mouth. The point of interest was that the patient had suffered from great pain and enlargement of the submaxillary glands and it had been thought that the malignant process had spread into them along the ducts. It was found, however, that the pain and enlargement were due to obstruction of the ducts by the tumour and not to malignant change in the glands themselves.—The cases were discussed by the President, Dr. A. G. Auld, Mr. Elworthy, Dr. A. W. Wilson, Mr. White, and Dr. Whitfield.

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on Nov. 1st, Dr. E. Cresswell Baber, the President, being in the chair.—Mr. W. G. Spencer showed a case of Tertiary Syphilitic Laryngeal Stenosis treated by Laryngo-fissure without Tracheotomy, the result of which had been most satisfactory. There was no dyspnœa and the patient had quite an audible voice.—Mr. F. H. Westmacott showed a series of specimens, photographs, and drawings illustrating the Inflammatory Diseases of the Nose and Accessory Cavities.—Dr. Herbert Tilley showed two Molar Teeth in which the crowns were healthy, but evidence of caries in the palatal root was present. The patients from whom they were extracted both suffered from suppuration of the corresponding maxillary antrum.—Dr. J. Donelan showed a case of Laryngeal Syphilis with Fixation of the Left Vocal Cord in a man, aged 52 years, and raised the question as to whether it was not malignant as well as syphilitic.—Dr. StClair Thomson showed a man, aged 33 years, who had been brought before the society in April last with Chronic Laryngitis and an Ulcer on one Vocal Cord, who now presented marked Lupus Infiltration and Ulceration of the Epiglottis.—Dr. E. B. Waggett showed a case of (?) Congenital Fenestration of the Anterior Pillars of the Fauces. Many such cases had been shown at the society

and much discussion had taken place as to whether they were of congenital origin or the result of scarlet fever. Dr. Clifford Beale said that since the last case of this sort was shown he had made inquiries at the fever hospitals and had learned that fenestration as the result of scarlet fever was practically unknown.—Mr. St. George Reid showed a series of Living Cultures of those Bacilli which simulate the Bacillus Tuberculosis by the staining reactions. Dr. Fitzgerald Powell showed a case of Papilloma of the Larynx which was peculiar in being almost pure white in appearance.—Dr. J. Dundas Grant showed a case of Epithelioma of the Epiglottis.—The operative treatment of such cases was discussed by Mr. H. T. Butlin and Dr. H. L. Lack.—Dr. Dundas Grant also showed a case of Nasal Stenosis in which the symptoms appeared to be chiefly subjective.—Mr. H. M. Ramsay showed a case of (?) Tuberculous Disease of the Epiglottis. It was thought to be lupus and suitable for treatment.—Dr. J. Bond showed a case of Swelling of the Left Ventricular Band in a boy, aged 14 years.

FOLKESTONE MEDICAL SOCIETY.—A meeting of this society was held on Nov. 1st.—Dr. W. J. Tyson, the President, congratulated Dr. J. E. G. Calverley on being made a C.M.G. in recognition of his services in South Africa.—Mr. A. Murdoch then read notes on a case treated by Anti-streptococcic Serum. On June 11th he attended a woman, aged 24 years, suffering from acute septicæmia, the focus of infection being a small operation wound in the right breast. Quinine, cold packs, &c., having failed to reduce the temperature he tried anti-streptococcic serum, injecting it altogether 12 times in 10 days, 10 cubic centimetres at a time, each time with most gratifying results. After this the patient made a steady and uninterrupted convalescence with the exception that a rash appeared on the body and limbs eight days after the last injection and lasted 24 hours. Mr. Murdoch was much struck with the power of the serum in reducing the temperature (more than once an injection of 10 cubic centimetres produced a steady fall from 105° F. to normal) and still more by its power of preventing a rise when given whilst the temperature was low. In no case did any ill-effect, either local or constitutional, follow an injection. He believed it to be most important to use fresh serum, to take the most scrupulous antiseptic precautions, to give it often and in good doses, and if it was to be of service to start it early in the disease and not as a last resource, as was so often done. He injected the serum each time into a different part of the body, but did not think the place mattered much. He, however, preferred the shin or the forearm. He thought that the use of ethyl chloride before inserting the somewhat large needle was a good plan.—In the subsequent discussion Mr. H. Braund, Dr. T. Eastes, Dr. P. G. Lewis, Dr. C. Latter, Mr. W. F. Chambers, Dr. A. E. Larking, Dr. L. Wainwright, Dr. Calverley, Dr. W. L. Chubb, Mr. A. Randall Davis, Dr. J. Hackney, and the President took part.—Mr. Yunge-Bateman, medical officer of health of Folkestone, read the resolutions of the recent Congress on Tuberculosis and asked the society to support him in getting the compulsory notification of tuberculosis adopted by the town council.—After a lengthy discussion the matter was adjourned to a special meeting.

HALIFAX AND DISTRICT MEDICAL SOCIETY.—The first meeting of the session of this society was held on Oct. 8th, when Dr. S. Lodge, the President, gave an address upon the Diagnosis and Treatment of Suppuration in the Middle Ear and its Complications. The differential diagnosis of marasmic thrombosis of the intracranial venous sinuses from infective and traumatic thromboses was discussed. The importance of recognising pneumococcal and tuberculous suppurative middle-ear mischief was also dwelt upon. The various operative procedures for suppurative processes in the middle ear and its adnexa were dealt with at length. Much stress was laid upon the necessity for following surgically the path of invasion of the cranial cavity whenever possible—e.g., draining a temporo-sphenoidal abscess through the tegmen tympani or a cerebellar abscess through erosion in the posterior surface of the petrous bone, thus preventing unnecessary wounding of the lateral lobes of the cerebellum to reach the abscess cavity.—A vote of thanks to the President for his address brought the proceedings to a close.—The second meeting of the society, held on Nov. 12th, was devoted to the exhibition of clinical cases and pathological specimens. Among others the following cases were shown:—Dr. George Hoyle: Congenital Absence of the Sternum.—Dr. T. H. C. Stevenson: Aphasia.—Dr. P. Leech: Tendon Lengthening.—Dr. J. C. Wright: Congenital Absence of Both Radii.—Dr. Lockwood: Ruptured Tubal Fœtation; Abdominal Section; Recovery.—Dr. A. Mantle: Lymphadenoma.—The pathological specimens included a Hydatid Mole and a Fœtus with Meningocele, both shown by Dr. J. F. Strickland.

FORFARSHIRE MEDICAL ASSOCIATION.—A meeting of this society was held on Nov. 1st, Professor D. MacEwan, the President, being in the chair.—The President referred to the loss the association had sustained by the death of Dr. J. W. Miller, an esteemed and active member who had practised in Dundee for the long period of 44 years. His life had been one of unceasing activity and of singular devotion to his profession and to the furthering of many objects relating to the health and well-being of the community. He held the office of physician to the Royal Infirmary for the usual term, and during that time he published a paper on the Thermometry of Continued Fevers. Afterwards as a consulting physician and as a director he rendered invaluable service in guiding the affairs of the institution. It was to his initiation that the existence of the Maternity Hospital was due. The President also referred to the death of a former President, Dr. Russell of Arbroath, which had occurred recently after a short illness.—Professor Chiene then delivered an address on Surgery 60 Years Ago and that of the Present Time, pointing out the changes which had taken place and the enormous increase in operations.—A meeting of the society was also held on Nov. 7th, Professor D. MacEwan, the President, being in the chair.—Dr. G. Halley showed a patient with Veldt Sores.—Dr. R. C. Buist read notes of several cases illustrative of Myomata and showed the tumours removed from a throat which he had operated on.—Dr. A. McGillivray described the advantages of Protargol in Ophthalmic Work. He used it in a solution of the strength of 10 per cent. in catarrhal conjunctivitis, ophthalmia neonatorum, gonorrhœal conjunctivitis, &c., and recommended it as better than silver nitrate. He had found no bad effects result from using it.—Mr. D. M. Greig spoke of its use in urethritis but said that he used it in a weaker solution. He also referred to the pain which it caused if a strong solution was used from the commencement of treatment.—The President referred to its use in vesical cases in solutions varying in strength from ½ per cent. to 4 per cent.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Nov. 13th, Mr. J. Collier, the President, being in the chair.—Dr. A. T. Wilkinson described a case of Congenital Idiopathic Dilatation of the Colon.—The President and Dr. C. H. Melland showed specimens from two cases illustrating Tuberculous Infiltration of Muscle.—Mr. Southam showed the specimens and mentioned three cases of Enterectomy and End-to-end Suture of the Intestine for the following conditions: (1) fæcal fistula involving the small intestine; (2) carcinoma of the sigmoid flexure of the colon; and (3) closure of a colotomy opening, the operation having been performed four years previously for the relief of simple ulceration of the rectum. In each instance the patient made a good recovery from the operation.—Dr. R. T. Williamson reported a case of Brain Tumour (of the centrum ovale) and showed microscopical specimens from the growth. The chief symptoms were hemiplegia of gradual onset, headache, and occasional vomiting. Optic neuritis and convulsions were absent. The tumour was a glioma rich in large cells (so-called "ganglionic neuro-glioma"). The cells presented various forms—large cells with several processes, oval or round cells with one short curved process, large spindle cells, large round cells without any process, and small glia cells.—Dr. E. S. Yonge read a short communication on Some Practical Points in the Pathology of Malignant Disease of the Larynx.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The second meeting of the session was held on Nov. 13th, Dr. B. J. Baron being in the chair.—Mr. T. Carwardine showed (1) a patient with Symmetrical Lipomata of Unusual Distribution; and (2) a case of Sarcoma which he considered had undergone spontaneous recovery.—Mr. C. A. Morton, Dr. T. Fisher, Dr. J. L. Firth, and Mr. S. R. Williams discussed the cases.—Dr. E. C. Williams showed a child with a peculiar Cardiac Murmur.—Dr. Michell Clarke, Dr. Stack, Dr. W. K. Wills, Dr. Fisher, Dr. E. Markham Skerritt, and Dr. C. Elliott spoke on the condition of the heart.—Dr. W. H. C.

Newnham showed the following specimens: (1) Ruptured Tubal Pregnancy; (2) Pregnant Fibroid Uterus; and (3) Fibroid Uterus of an unusual character.—Dr. J. Swain, Mr. Carwardine, and Mr. Morton commented on the specimens.—Dr. Fisher showed specimens of Actinomycosis of the Liver and the Lungs.—Dr. Swain, Dr. Skerritt, Mr. Carwardine, and Mr. J. Paul Bush spoke on the subject.—Dr. Walter C. Swayne read a paper on Three Cases of Abdominal Section and showed the specimens.—Mr. Morton discussed the paper.—Mr. James Taylor read a paper on X Rays in the Diagnosis of Renal Calculus.—Mr. Paul Bush, Dr. Swain, Mr. Morton, Dr. F. H. Edgeworth, Mr. A. L. Flemming, and Dr. Fisher discussed the paper.

NORTH-EAST LONDON CLINICAL SOCIETY.—A meeting of this society was held on Nov. 7th, Dr. F. J. Tresilian, the President, being in the chair.—Dr. E. F. Willoughby read notes on two cases of Poisoning, one by atropine and the other by morphia.—The President showed (1) a case of Sub-glottic Stenosis in a man, aged 40 years, the result of tertiary syphilis; (2) a case of Diabetic Retinitis; and (3) specimens of Inferior Turbinals removed by the spokeshave.—Mr. Walter Edmunds showed a girl, aged 17 years, who had been operated on for Perforated Gastric Ulcer. A short discussion followed on the early diagnosis and treatment of gastric ulcer.—Dr. Hooper May showed an Enterolith removed by Enterotomy.—Dr. A. J. Whiting showed (1) a case of Athetosis; and (2) a case of Paralysis following German Measles.—Mr. H. W. Carson showed (1) a case of Pseudo-hermaphroditism; and (2) an Ovary and Fallopian Tube removed from the Sac of a Strangulated Inguinal Hernia.—Dr. Murray Leslie showed a case of Aneurysm of the Arch of the Aorta in a woman, aged 45 years, the subject of tertiary syphilis. A discussion followed on the treatment by the gelatin method.—Dr. Arthur Giles showed specimens of (1) Carcinoma of the Cervix removed by Vaginal Hysterectomy; and (2) two Fallopian Tubes removed by Abdominal Section for Pyosalpinx.—Dr. Veitch Clark showed a case of Congenital Pulmonary Stenosis.

GLASGOW SOUTHERN MEDICAL SOCIETY.—A meeting of this society was held on Nov. 14th, Dr. John Stewart, the President, being in the chair.—Dr. A. Maitland Ramsay gave a series of interesting demonstrations in connexion with Diseases of the Eye. The first demonstration consisted of an exhibition of the more common external diseases of the eye and ophthalmoscopic cases; some pathological specimens, microscopic and macroscopic; and a number of very fine stereoscopic photographs, skiagrams, and lantern slides. At a later part of the evening a number of optical instruments were displayed and a demonstration was given of the Modern Application of Electricity in the Treatment of Eye Disease. The Finsen lamp was also shown and its application in photo-therapy was demonstrated. Dr. Ramsay brought the proceedings of the evening to a close by a short and lucid lecture, accompanied by lantern demonstration, on Hypopyon Ulcer, including its Causation, Complications, and Treatment.—On the motion of the President a cordial vote of thanks was awarded to Dr. Ramsay for his demonstrations.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 6th.—Mr. E. C. Kingdon, the President, delivered an address on the Temples and Ritual of Æsculapius, illustrated by lantern slides kindly lent to him by Dr. R. Caton (Liverpool). After referring to the mythological accounts of the birth and subsequent deification of Æsculapius the President described the ruins which had been discovered on the sites on the Asclepia at Epidaurus and Athens. He showed that it was possible from the numerous inscriptions and votive tablets which had been recovered, aided by the descriptions of Pausanias, to discern the character of the worship of Æsculapius, its relations to ancient medicine, and its bearings on Greek life in general.—There was a large attendance and at the close of the proceedings a vote of thanks, proposed by Dr. W. Hunter and seconded by Dr. C. H. Cattle, was unanimously accorded to the President for his most interesting address.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 7th, Dr. C. H. Willey, the President, being in the chair.—Dr. J. H. Keeling related Two Cases of Abdominal Hysterectomy and showed the specimens.—Dr. D. Burgess showed specimens from: (1) a case of Addison's Disease in a boy, aged nine years; and (2) a case of Granular Contracted Kidney in a boy, aged 16 years, a plumber, who had suffered from lead-poisoning.—Mr. A. M. Connell showed specimens from the following cases: (1) Abdominal Nephrectomy for Sarcoma; and (2) Lumbar Nephrectomy for Tubercle.—Dr. A. J. Hall showed a Simple Method for the Clinical Estimation of Hæmoglobin.—Dr. C. N. Gwynne read a paper entitled, "Congenital Hypertrophy of the Sigmoid," and showed a case. The patient, a boy, aged six and a half years, had been subject from birth to an exaggerated form of chronic constipation. Of late years his abdomen had been much enlarged and before admission had been rapidly increasing until it measured 31 inches in circumference at the umbilicus. As no action of the bowels could be obtained an iliac colotomy was performed. After the operation the boy improved in general health and his abdomen gradually became reduced to almost normal dimensions.

Reviews and Notices of Books.

Dictionary of National Biography. Supplement. London: Smith, Elder, and Co. 1901. Three vols. Price 15s. per vol.

THE supplement to the "Dictionary of National Biography" contains a thousand articles of which 200 represent accidental omissions from the previously published 63 volumes, the remainder being the biographies of persons who have died during the 15 years occupied by the quarterly issue of the work. It was originally intended that the supplement to the Dictionary should bring the biographical record of national achievement to the end of the nineteenth century, but the death of Queen Victoria occurring on Jan. 22nd, 1901, closed so definite and important an epoch in British history that this date was considered by the editor to be a better defined historic landmark than the mere calendar date. The scope of the supplement was consequently extended so that the day of the Queen's death might become its farthest limit instead of the end of the century with which that sad event so nearly synchronised.

The longest biography in the supplementary volumes is, of course, that of the late Queen. It is a conscientious if dull record from the pen of the editor, Mr. Sidney Lee, which does not reveal proper appreciation of her great qualities, though it extols her devotion to duty and her beautiful family life. A brief summary at the end of the article shows the late Queen's temperament and her attitude towards such important matters as Imperial unity, the business of State, the prerogative of the Crown, and foreign relations. Mr. Lee's is a painstaking performance of what was obviously a very delicate task. If he has not quite risen to his opportunity it will be allowed that to record in a summary the life of one of the greatest monarchs the world has ever seen within a few months of her death is a performance that might tax the powers of the ablest historian.

Another long biography will be found in the second supplementary volume, which will be read with interest by all citizens of the empire. It is the life of Mr. Gladstone. Mr. Herbert Paul has performed a difficult literary feat in presenting us within a readable compass so full an account of the career of the great Liberal statesman. His article is an abbreviated edition of a biography which will shortly appear in full. Other men of general eminence whose work might be supposed to be of particular interest to medical men and whose lives are contained in these volumes are the first Duke of Westminster; the eighth Duke of Argyll; the seventh Duke of Devonshire; Lord Armstrong, the great engineer; Matthew Arnold; Sir Joseph Bazalgette, the engineer of the Thames Embankment; Charles Bradlaugh, reformer; the following artists, Sir

Edward Burne-Jones, Alfred Hunt, George du Maurier, Lord Leighton, and Sir John Millais; Sir Samuel Baker, traveller; Sir Richard Burton, traveller and scholar; P. H. Carpenter, zoologist; "Lewis Carroll"; Henry Bowman Brady, pharmacist; Lord Randolph Churchill; Lord Coleridge and Lord Russell, both Lord Chief Justices of England; Cayley, the mathematician; Thomas Huxley; Sir John Bennet Lawes, a pioneer of scientific agriculture; Archbishop Benson; Max Müller, philologist; Blackmore, James Payn, and Grant Allen, novelists, the last-named being also an ardent evolutionist and Darwinian student; Sir Edwin Chadwick, sanitarian; G. J. Symons, meteorologist; John Ruskin; Fred Archer, the well-known jockey; Oscar Wilde; and Barnett Barnato.

The medical names are of great interest, including as they do Sir Henry Acland, John Anderson, William Francis Ainsworth, Sir Rutherford Alcock, Charles Spence Bate, Sir James Risdon Bennett, Edward Green Balfour, Thomas Graham Balfour, Henry Walter Bellew, John Syer Bristowe, C. E. Brown-Séquard, Sir J. C. Bucknill, Sir George Buchanan, Sir George Burrows, A. J. Carpenter, Sir Andrew Clark, James Matthews Duncan, Ernest Hart, Jabez Hogg, Sir George Murray Humphry, Sir William Jenner, William Munk, Sir James Paget, Sir William Priestley, Sir Richard Quain, Sir William Stokes, R. Lawson Tait, St. George Jackson Mivart, and Sir Richard Thorne Thorne. Of the career of our professional brethren included in the volumes under notice it is not necessary in most instances to speak further here. Their life's work has but recently come to an end and their labours must be fresh in the minds of all men, and a full account of them has appeared in these columns, upon which we see that the biographers have in most instances drawn. But of those who are the less known in a purely professional way it is fitting that we should say something. William Francis Ainsworth (1807–1896) was born at Exeter, his father being a captain in the army. In 1827 he became a Licentiate of the Royal College of Surgeons of Edinburgh and afterwards studied in London and Paris, at which latter place he became an *interne* in the School of Mines. While in France he studied geology in Auvergne and the Pyrenees. In 1831 he made an elaborate study of the cholera outbreak at Sunderland, which in the following year led to his being appointed surgeon to the cholera hospital of St. George's, Hanover-square. On the disease appearing in Ireland Ainsworth acted successively as surgeon to the hospitals at Westport, Ballinrobe, Claremorris, and Newport. In 1835 he was appointed to the Euphrates Valley Expedition under Francis Rawdon Chesney as surgeon and geologist, and shortly after his return he went out to visit the Christians of Chaldea—an expedition the expenses of which were borne jointly by the Royal Geographical Society and the Society for Promoting Christian Knowledge. In 1840 he explored the Kurdish mountains and visited the Lake of Urmi in Persia, around which are a number of Nestorian villages. After his return to England he settled at Hammersmith and was one of the founders of the West London Hospital. Sir Rutherford Alcock (1809–1897) was the son of a medical man and was himself educated for the medical profession. He was for a time house surgeon at Westminster Hospital, and in 1832 was appointed surgeon to the British-Portuguese force operating in Portugal. In 1836 he was transferred to the marine brigade engaged in the Carlist War and became deputy-inspector-general of hospitals. On returning to England he held the post of lecturer in surgery at Sydenham College. But his real life's work commenced on his being appointed consul at Fuchow whence after one and a half years he was transferred to Shanghai. His services in Japan, where he was consul-general, and again at Peking, where he was Minister Plenipotentiary, are writ large in the diplomatic annals of his country. Edward Green Balfour (1813–1889) was born at Montrose, studied medicine at Edinburgh, and in 1834 entered the medical department of the Indian Army. His service in India covered a period of 42 years, during which time he did a vast amount of valuable work both from the purely medical point of view and as an organiser. His great work was the monumental "Encyclopædia of India and of Eastern and Southern Asia, Commercial, Industrial, and Scientific," which appeared first in 1857. From 1871 to 1876 he was, as surgeon-general, head of the Madras Medical Department. Thomas Graham Balfour (1813–1891) graduated as M.D. of Edinburgh in 1834 and in 1836 entered the Army Medical Department. In 1857 he was appointed secretary to Sidney Herbert's Committee on the sanitary state of the army, and in 1859 was appointed deputy-inspector-general in charge of the statistical branch of the Army Medical Department. He was elected F.R.S. in 1858 and in 1887 was appointed honorary physician to the Queen. We may parenthetically mention that he was for many years a valued member of our staff. Charles Spence Bate (1819–1889) was educated as a dentist, and in 1860 received the licence of the Royal College of Surgeons of England to practise dentistry. He was quite at the head of his profession and in 1885 was president of the Odontological Society, while at the International Medical Congress held in London in 1881 he served as vice-president of the odontological section. He lived at Plymouth and in addition to his purely professional attainments was recognised as the greatest living authority on crustacea. Sir Edwin Chadwick, though not strictly speaking a medical man in that he did not study medicine and had no medical qualification, was, however, so eminent as a sanitarian that he may claim to be mentioned among medical men. He was born in 1800 and educated for the legal profession. He was always interested in sanitary matters and explored fever dens at the risk of his life, when in 1832 he received the offer of an assistant Poor-law commissionership. In the following year he was made a chief commissioner. Space fails us to enumerate in detail all Chadwick's services to the body politic, but we may say that the Ten Hours Act, the half-time system—not, by the way, an unmixed blessing—and the Employers' Liability Act (1898) were due to his report on factories, the investigations for which began in 1833. In sanitary matters it was owing to him that the first sanitary commission was appointed in 1839, while he was the first to recommend a separate system of drainage for London. During the Crimean war he persuaded Palmerston to send out a commission of inquiry into the condition of the troops, and he did much sanitary work for India, including a scheme for the drainage of Cawnpore.

So with the issue of the third supplementary volume closes a work upon which all concerned may congratulate themselves. A great scheme has been steadily carried out, not without slips and inaccuracies, but on the whole impartially and ably. Within the 66 volumes is contained the record of our "rough island story." From Cassivelaunus to Victoria runs the tale of men and women who have worked each in their separate sphere mainly for the good, sometimes perhaps for the evil, of their fellows. Times change, one generation follows upon another, but the struggles, the failures, the successes, the falls and the rising again are still for us who remain here as they were for those who, in the words of by no means the least man mentioned in the Dictionary, have "sailed into the calm."

The Nordrach Treatment for Consumptives in this Country. By JAMES ARTHUR GIBSON. London: Sampson Low, Marston, and Co. 1901. 8vo, pp. 163. Price 3*s.* 6*d.*

THIS is a republication of signed articles on consumption which have appeared during the last two years in the *Nineteenth Century* and the *Westminster Review*, with

considerable additions and alterations. The writer is not a medical man, but has been trained as a chemist and, as he states in the first chapter, has himself suffered from pulmonary consumption and has been cured at Nordrach. The tone of the whole book is optimistic in the extreme and the style is trenchant and enthusiastic. The author undoubtedly has the courage of his opinions, and as the work is not addressed particularly to the medical profession, our ideas and prejudices are not too tenderly handled; at the same time, due respect is shown and nowhere in the book is there any lack of courtesy or good feeling.

The writer is firmly convinced not only that pulmonary phthisis is curable, but that the treatment carried out at Nordrach under Dr. Otto Walther is the true and efficient one; also that the Nordrach method could be carried out equally well in any climate whatsoever, for "climate certainly has nothing to do either with the cause or the cure of consumption." Patients with phthisis are recommended to go out in all weathers, fogs included. It is with regard to this subject of climate alone that we cannot heartily endorse everything that the author has written. His technical and scientific knowledge is of no mean order, but he is not a medical man and underrates the value of the climatic treatment of lung disease. He omits to notice the irritating nature of the fogs and of some of the winds in large cities; he makes nothing of the effect produced on irritable mucous membranes by the sulphurous and other particles in the air. Possibly for many years we in the profession have over-estimated the effects of climate and have sent patients away from home on account of their acquired weakness instead of attempting to harden them and to fit them to remain where they are.

It is, perhaps, hardly surprising that the author, with such advanced ideas as his, should have been called a visionary; that is the fate of everyone in the front rank of the ideas of this age. On page 27 we read: "By these means—preventing the spread of the disease, curing to the utmost extent the existing cases, and singling out at once fresh cases for treatment—tuberculosis in man would at no distant date be eradicated and a death from such a cause would be as rare in this country as a death from leprosy." The author does not leave the practical side of the subject at this point. He goes into the questions of building sanatoriums, of the expenses of the method, and of the training of suitable medical officers very thoroughly, and writes with much breadth of view and common sense. The profession in England is accused of being behind the time in its efforts to deal with the scourge of consumption, which yearly accounts for from 50,000 to 70,000 deaths in the British Isles. However, the profession is not deserving of the blame in this matter. Medical men do their very best in the face of very difficult conditions. It is not true that medical men are, as a whole, ignorant of the conditions under which consumptives are most likely to become cured, but the profession is most inadequately represented in all the councils of the nation and its members have to produce real medical reforms by educating the whole public and not by influencing the few legislators.

It is only fair to Mr. Gibson to acknowledge that he has answered his critics in a thoroughly conscientious manner. The old idea of the soundness of the principle of always "starving a fever" has been shown to be erroneous; for at Nordrach even patients with extreme pyrexial phthisis, confined to bed and greatly debilitated, are fed with large meals, greatly to their discomfort at first, but greatly to their benefit subsequently. In fact, it is the only hope for far advanced cases. Some practitioners have thought that this systematic overfeeding would necessarily in some cases result in "seriously damaged digestive apparatus" and to disprove this Mr. Gibson has quoted several medical authorities having special sources of knowledge. Dr. R. Mander Smyth, who was a Nordrach patient and once Dr. Walther's assistant, is emphatic in his views of the physiological value of the Nordrach method, and Dr. W. R. Thurnam, also a cured patient, is of the same way of thinking. As to the idea that surely the weight thus gained under pressure must be rapidly lost when the treatment has ceased, the author states that nothing of the kind occurs unless through subsequent carelessness. The fourth and last section of the book is devoted to the hygienic virtues of the "open window" and the author has thoroughly assimilated all of Dr. Otto Walther's views with regard to the desirability of draughts. The book is worth reading, if only for this last section, which is written in a breezy, bracing style which cannot fail to interest those who love fresh air, exercise, and the tone of an open-air life. Whatever its faults, the book is the work of one who is thoroughly in earnest and thoroughly practical.

The Principles and Practice of Medicine, designed for the Use of Practitioners and Students of Medicine. By WILLIAM OSLER, M.D., LL.D. Edin., F.R.S., F.R.C.P., Professor of Medicine at the Johns Hopkins University, and Physician-in-Chief to the Johns Hopkins Hospital, Baltimore; formerly Professor of the Institutes of Medicine, McGill University, Montreal; and Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia. Fourth edition. Edinburgh and London: Young J. Pentland. 1901. Pp. 1182. Price 24*s*.

THE book of which this is the fourth edition forced itself from the first by its merits into the foremost rank among works on the principles and practice of medicine. We have on previous occasions had the gratification of calling attention to these merits and of since seeing how they have been extensively recognised and appreciated. "Osler's Medicine," it is needless to say, is a very well-known book in the medical profession of this country and other countries. It is a work of supererogation, therefore, to make the appearance of a new edition of it the occasion of any lengthy review. We have only to satisfy ourselves that it has been carefully revised and that such changes and additions have been made to it as are required by the progress of medical science. We need have no hesitation in saying that this has been done thoroughly and in a spirit of intellectual honesty. Some of the chapters—that on typhoid fever in Section I. on Specific Infectious Diseases, for example—have been in great part re-written and, practically speaking, many new articles have been added, whilst others have either been recast or have re-ceived such additions and amendments at the hands of the author and those associated with him as fully to sustain the reputation of the work and to justify the confidence which the profession extended to the previous editions. Turning over the pages of a typical treatise on modern medicine and lingering here and there over sections devoted to subjects of fresh or special interest, it is impossible to avoid being struck with the notable change which has taken place between the older treatises and those of the present time. The spirit, the method, and even the literary style have undergone a revolution. The germ theory of disease, bacteriological researches, and many recent discoveries have not only opened out new fields of investigation, but have changed the aspects of old ones. This is prominently brought out in the volume before us and may be at once seen by reading those portions of it which deal with specific infectious fevers, with the subject of malaria and the principal diseases of tropical and sub-tropical climates (which receive a good deal of consideration), with tuberculosis, and with diseases of the nervous system. The best and more classical works of the past owed much of their value to their being a record of the results of the reading and matured experience and the shrewd and penetrating observation of their authors. The graphic descriptions of disease, illustrated by clinical details which were both pertinent and

interesting, were often set forth in a style which was so good and so lucid as to make them admirable reading; whereas the author of a modern treatise is imbued with a scientific aim, spirit, and method. He presses towards precision and system, strives to relegate facts and phenomena to some law or order of things, and, amid apparent diversity, seeks for etiological and pathological unity and guiding principles of prophylaxis wherever these are discoverable. It is characteristic of treatises like Osler's "Principles and Practice of Medicine" that they are moulded on these lines. It would extend our notice to unreasonable length if we were to detail the numerous changes and additions which have been made to bring this fourth edition well up to date, but this, as we have intimated, has been conscientiously done. In any case we trust we have said enough to indicate the very high opinion we entertain of its merits. In conclusion it may be added that this fresh edition of Osler's "Principles and Practice of Medicine" is a large volume consisting altogether of nearly 1200 pages, that it is graphically illustrated here and there with a few tables and plates, and that it is well printed and supplied with a good index.

Outlines of Gynæcological Pathology and Morbid Anatomy. By C. HUBERT ROBERTS, M.D. Lond. With 151 illustrations, mostly original. London: J. and A. Churchill. 1901. 8vo, pp. 332. Price 21*s*.

WHEN we saw it announced that Messrs. Churchill were to publish a manual upon Gynæcological Pathology and Morbid Anatomy by Dr. Hubert Roberts we hoped that the want which had long been felt of a trustworthy English text book upon this subject was to be met. With the published work before us we must confess to a considerable sense of disappointment. Dr. Roberts's views and ours as to what should be included under the head of gynæcological pathology and morbid anatomy are widely different. In his work a great deal has been inserted which we would wish omitted and a great deal has been omitted which we think might well have been inserted. If we may give an example we would suggest that the purely anatomical details and the chapters upon the Diseases of the Bladder, Urethra, and Ureters might all have been left out, while a book upon gynæcological morbid anatomy which does not contain a single illustration of the microscopical changes met with in such common conditions as vaginitis, erosions of the cervix, extra-uterine gestation, fibro-myomata of the uterus, sarcoma of the uterus, oöphoritis, and the various forms of salpingitis seems to us to exhibit many most important omissions. It may be urged either that such illustrations are not of the value that we think them or that such specimens are rare and difficult to obtain. To the latter objection we would reply that the collection and examination of such material is one of the most essential preliminaries to the writing of a text-book upon gynæcological morbid anatomy. With regard to the necessity of such illustrations our experience is that students find little difficulty in recognising naked-eye specimens of gynæcological pathology. This is no doubt due to the numerous opportunities they have of seeing and examining them in the operating theatre and the pathological museum. They usually, however, possess but little knowledge of the pathological changes which can only be detected by the microscopical examination of these specimens. This knowledge may be acquired either by the examination of the microscopical sections themselves or by the study of book illustrations. Descriptions of microscopical detail without any illustrations are admittedly difficult to follow and to understand. For these reasons we think that Dr. Roberts would have materially enhanced the value of his book had he included drawings of the microscopical changes present in the various important conditions mentioned. As a reflex of the current teaching of many English gynæcologists, and more especially of those connected with the medical school of St. Bartholomew's Hospital, this work has a certain value and contains a good deal of useful information. It is, however, almost impossible to criticise the subject matter of a book of this kind since a very large part of it is made up, not of the opinions or experience of the writer himself, but of those of the various authors whom he quotes. We do not, therefore, propose to criticise the work in detail; it will suffice to say that the pathology of the various parts of the genital tract is fully discussed and that besides the special chapters already alluded to there are others on Gonorrhœa in Relation to Pelvic Inflammation, on Menstruation and its Disorders, and a final chapter on Micro-organisms in Relation to Diseases of Women. Dr. Roberts has given most copious references to the many papers and books which he has consulted, and no doubt, as he says, they will be of service to his readers. At the same time we think, and always have thought, that such references are entirely out of place in a manual intended primarily for students, and we must regretfully add that Dr. Roberts's style is so involved as to considerably lessen the value of his work as a text-book for learners in the subjects of which it treats. To come to praise the illustrations are the best part of the work and many of them are of great excellence. Of the 85 or so which are original the majority are drawn by the author himself from specimens in the museum of the Royal College of Surgeons of England or in the museums of St. Thomas's Hospital and St. Bartholomew's Hospital. They are well reproduced and are printed upon special interleaved pages apart from the text, a method which is always necessary if justice is to be done to good drawings. The index is full and complete.

We cannot but regret that, according to our view, Dr. Roberts has not made a better use of his opportunity. No English book exists at the present time dealing solely with gynæcological morbid anatomy, and had the author confined his attention mainly to this part of the subject and written a book comparable to the very excellent manuals of Orthmann or Amann, or, if he wished to write a more comprehensive treatise, had he modelled his work upon that of Gebhard, we think that the result would have been of much greater value and of much greater utility to the student.

CHRISTMAS AND NEW YEAR GREETING CARDS.

THE artistic productions of Messrs. Raphael Tuck and Sons, of Raphael House, Moorfields, E.C., for the approaching season are quite up to the high standard of past years, and the album now before us includes some of the best features of its predecessors and several new designs. Among so much which is so good the honour of first place must be accorded to the "Royal" card, a replica of the last annual Christmas card which Messrs. Tuck had the honour of preparing for the late Queen Victoria, and which Her Majesty pronounced to be "beautiful." As will be readily understood in this connexion where our late Queen was concerned, the subject chosen is that of a "true" Christmas card—namely, the Blessed Virgin and the Child Jesus, beautifully treated by Harriett M. Bennett and reproduced in Messrs. Tuck's best style. Among the novelties of the present collection may be noted the "Bronze Statuesque" series, all clever representations in relief; the "Heraldic," the "Secessionist," and the "Goodwill" series. There are also numerous picture books, private autograph greeting cards, and pictorial calendars, one of the last-named, the "Sacred Art" calendar, comprising four very excellent reproductions in colour of well-known pictures by Raphael and Correggio. It is ungracious, perhaps, to criticise where all is generally so good, but we cannot help regretting the general tendency to eliminate from pictorial Christmas cards those representations of the Infant Saviour—in olden times the rule—without which present-day so-called "Christmas" cards are quite meaningless.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 23, 1901.

Medical Students and the London Schools.

THE reduction in the entry of students in the London medical schools is this year undoubted. We published in THE LANCET of Nov. 9th (p. 1286) from a well-informed correspondent an article which attempted, and more or less succeeded in giving, an explanation of this falling off, but we believe that the attraction of the Scotch and provincial medical degrees is responsible for the paucity of London recruits to the medical profession every whit as much as the elimination from the list of entrance tests of the second-class examination of the College of Preceptors. Mr. F. W. COLLINGWOOD'S brief letter in our columns last week (p. 1375) calls attention to this point and reminds us that we have received through him a circular upon the subject of medical degrees for London students emanating from a newly formed body entitled the London Licentiates and Members Society. The aims and objects of this society are as follows: (1) to petition the Royal Colleges, (*a*) to obtain powers to grant degrees, (*b*) or in the alternative to join with the University (i.e. of London) for the same object; and (2) to request the Royal College of Physicians to rescind their by-law prohibiting Fellows, Members, and Licentiates from using the popular title of "Doctor." The circular further calls attention to the fact that in 1887 the two English Royal Colleges endeavoured to obtain powers to grant a degree on the same standard as that on which they then granted their diplomas, and no opposition was offered to this scheme by the University of London. The first meeting of the society will be held on Friday, Nov. 29th, at the Wimpole Hotel, Wimpole-street, when Dr. F. J. SMITH will preside and an attempt will be made to formulate a line of policy.

We have every sympathy with the attempt of this latest combination to obtain a medical degree for London students upon similar terms to those enjoyed by the students of the Scotch and provincial universities, but we do not quite see from their circular what procedure they propose to employ that has not been vainly employed already. Much is to be said for perseverance; and the keeping of their grievance prominently before the large section of the medical profession who have received their education in the London schools has its commendable side, for if the possibility of a practical move should reveal itself many will be familiar with the arguments for reform. But the London Licentiates and Members Society will not attract many adherents unless they can show that they have reasonable hopes of succeeding where others have failed. The movement for the granting of degrees on equitable terms to London medical students was started in THE LANCET of July 25th, 1885, and a memorial in its support was presented to the Royal Colleges of Physicians of London and Surgeons of England, signed by 600 teachers, practitioners, and students of medicine. In October, 1885, Sir SAMUEL WILKS successfully moved in the Royal College of Physicians of London, "That it is desirable that persons examined by the Royal College of Physicians of London and the Royal College of Surgeons of England conjointly and found duly qualified, either by the ordinary or an additional qualification, should have a degree in medicine and surgery conferred on them." This motion was adopted, having been supported by many of the most eminent Fellows of the College. Delegates were appointed by both Royal Colleges to consider the question of the desirability and practicability of granting degrees in medicine and surgery to persons who had passed the conjoint examinations of the two Colleges, and several reports were presented by them to the Colleges, the last in December, 1886. All the reports were in favour of giving a degree in medicine and surgery to London medical students by the Royal Colleges. An application for this purpose was then made to the Crown. The scheme was brought before a Royal Commission, and on April 28th, 1889, the petition to grant degrees in medicine and surgery was unanimously rejected. The reports of the delegates, the speeches of the leaders of the medical profession in London, all eager to remedy an acknowledged hardship, and a large number of articles and well-informed communications upon the subject will be found in our columns. Is the London Licentiates and Members Society familiar with the history of what has been attempted?

Dr. F. J. SMITH, in his letter which we publish this week on p. 1444, foreshadows that the first combined attempt of the London Licentiates and Members Society will be in the direction of persuading the Royal Colleges of Physicians of London and Surgeons of England to approach the University of London in order that the University may admit the members of the society to its final examinations in medicine. We doubt if the Royal Colleges will be persuaded, or if the University of London is likely to look kindly upon the idea. If the Royal Colleges can influence the reformed University of London to admit London medical students to a modified curriculum under the supervision of the Royal Colleges, and to make the matriculation and preliminary scientific examinations more practical and practicable than they are now, the London student will be placed on much the same basis as his Scottish and provincial brethren. The London Licentiates and Members Society might work towards this end if they fail in other directions. But here their work will be altruistic, for if success should crown their efforts justice would be done to the future London medical students, but no retrospective consideration, we think, would be extended to past diplomates. We do not consider it in the least likely that the University of London will ever grant its medical degree to existing Licentiates and Members of the Royal Colleges upon easy terms. This is a hard thought, but there is no kindness in buoying up a large circle of our readers to expect otherwise.

The Public Hearing of Indecent Cases.

IN a case now attracting considerable public attention evidence is being given before the magistrate at one of the London police-courts of alleged criminal acts

absolutely startling in their hideous and bestial filthiness. More or less expurgated versions of this evidence are published in many newspapers, and at the back of the court, as is usual on such occasions, an eager crowd gratifies a prurient curiosity by listening to the gruesome narrative which it is the duty of the prosecuting counsel to elicit and of the magistrate to hear. From time to time cases occur involving evidence of acts of indecency and lust, and frequently on these occasions the question is raised as to whether it is right that the public should be admitted to the hearing—the public consisting admittedly, to a large extent, of idle men curious to hear the obscene, for women and children are almost invariably excluded, and the atmosphere of a criminal court is not attractive to the better class of citizen. On these occasions many persons strongly condemn the reporting of any intelligible details of the cases for reasons which are worth medical consideration.

The publication of obscene matter as such involves danger to those responsible for it, and the question may, as a rule, be left to the discretion of the editor whose newspaper will suffer should his readers' feelings be outraged. With regard to the admission of the public to courts in which evidence is being given of obscene acts and crimes of lust the precise legal position of the public is not universally known or absolutely clear. The final trial of crimes, whether by courts of summary jurisdiction or before juries on indictment, and the trial of matrimonial cases in which divorce as distinct from a decree of nullity is asked for, must be in public. In indictable offences the preliminary inquiry before the magistrate may be in private because, though the court is one of summary jurisdiction, the case is not being "tried, determined, or adjudged" by it. This is a point on which there has been no judicial decision, but the course of excluding the public has been recently resorted to and eminent opinions are in favour of its legality. This course, therefore, might legally be adopted by the magistrate in the HOMOS case to which reference has been made. In the hearing of petitions for a decree of nullity of marriage the procedure of the ecclesiastical courts is maintained as far as possible, and the court may hear such a suit *in camerâ*. In the trial of civil actions the question has never been actually decided. In an action, however, involving questions as to unnatural offences at a school some years ago Mr. Justice DENMAN, sitting in London, excluded the public from his court. A barrister, who claimed admission as a member of the public only, raised a question as to his right to be present, but the point was never, we believe, fought out, and as far as that case has a bearing on the question the public may be excluded by the judge in his discretion from the trial of civil causes. On the general question of the desirability of admitting the public to all legal proceedings, and particularly to those involving accusations of crime, there is something to be said on both sides, and there are also two views on the question of forbidding all reports of cases in which indecency is involved. The persons who gloat over the details of acts of lust given in evidence in courts of law are not generally in attendance for any useful purpose, and their moral tone will not be raised by what they hear. They are, however, not likely to be young and innocent, for women and children are excluded in the discretion of the judge or magistrate, and those who go to hear filthy cases know, as a rule, the nature of the evidence which is going to be given and can always leave the court if they desire it. It must be remembered, also, that in newspapers circulating in certain classes of society where indecency might be regarded with levity the same paper which describes the offence in many cases brings home to the reader the heavy penalty attaching to it. On the side of public hearing of all cases in open courts there is a strong feeling in British breasts. We are, as a nation, averse from anything that savours of the secret tribunal and private inquiry, and the matter has its practical aspect apart from any prejudice or unreasonable fear of suffering an unfair trial in a British court of justice. The essential advantage of publicity lies in this fact, as it seems to us:—no one can say that he was accused and tried in secret, so that persons who otherwise might have come forward to give evidence of his innocence never even knew that an accusation was laid against him or were wholly ignorant of the evidence upon which the accusation was based. The advantage accruing from publicity may not be conspicuous upon many occasions, but it will be undeniable that it occurs sometimes. All lawyers connected with criminal practice can recall instances where someone, unknown to them and admitted to the court as a member of the public only, has suggested a question or given information at a crucial point in the case which has proved of real importance, eliciting evidence which but for the admission of the public would have been withheld, and without which a wrong and unjust conclusion of the trial must have occurred. Many will recall the action arising some years ago out of the allegation that a young lady had robbed her friend of a valuable pearl ornament. The young lady denied the theft, brought an action for libel, and caused every possible suggestion of dishonesty and moral turpitude to be raised against her accusers. The public were almost wholly in her favour; and the case would quite possibly have resulted in her winning a verdict had not a London tradesman who had read the report of the trial in the newspapers voluntarily come forward and proved conclusively that the plaintiff in the libel case stole the pearls and for her own ends was blackening the characters of innocent persons. It is not easy to accept the proposition that a man is to be wholly without the protection which public trial and public reports of trials afford simply because the accusation against him is of an exceptionally foul description, even though the hearing of such cases *in camerâ* would relieve parents of the duty of supervising what their children read and would deprive the vicious of an opportunity of listening to a narrative of events which, if they are vicious already, can hardly be said to corrupt them.

The practice satisfactorily employed in nullity suits has no bearing on the matter. The evidence in these cases, when they are heard *in camerâ*, is generally that of the parties and of medical witnesses as to the sexual capacity of one of the parties. Publicity would be revolting and could serve no useful end, for the circumstances in which someone casually in court could render help to justice in such cases cannot be imagined. In the preliminary hearing

of such cases as the HOROS case the magistrate may exclude the public, including the newspaper reporters, but this is a matter of detail. The main question is whether at the hearing in any court of any case involving indecency the court should be able to exclude the public. Of the desirability of such a change in our legal customs we have grave doubts. We believe that such benefit as may be derived from publicity should be accorded to all, whatever the crimes may be of which they are accused; while in the case of newspapers the law is already strong enough to deal with transgressors whose sense of decency does not sufficiently restrain them.

Fog and Smoke.

THOSE who live in London stand in little need of being reminded that the town has this season suffered greatly from the effects of fog. Those who live in the country have received but few letters from the metropolis without being informed of the fact, and the French public have been favoured with the most full and circumstantial particulars. The London correspondent of that excellent journal the Paris *Figaro* has informed his readers that on one occasion the fog was so dense in the town that it was with difficulty that the audiences at the theatres could see the actors, and that many people who left home for the evening intending to return found it wiser to spend the night at their clubs or at some neighbouring hotel. The account may perhaps be thought rather highly coloured, and it does not on the face of it appear very accurate, but, on the other hand, the ill-effects of a dense fog are not easily over-estimated: as a rule, the most important of them are minimised and often are entirely ignored. For whether looked at from the mental, the physical, or the economic point of view fogs have no redeeming feature.

No one who has had any personal experience of the question would deny that days spent in darkness or in artificial light have a very depressing effect on the mind. The mental constitution of the inhabitants of a dark city is never cheerful. The fact of existence ceases to be pleasurable. The characteristic peculiarities of the English "spleen" which are always insisted on by our French neighbours become evident even to ourselves. Of the physical discomforts of fog everyone is conscious; while the increase which it causes in the death-rate can be seen in the published tables of mortality. But these fail to show the whole of the harm which is caused, for many hundreds, if not thousands, of Londoners, who have become aware of the fact that fogs cause the bronchitis from which they suffer during every winter in town, now wisely absent themselves, but they carry with them the permanent structural injuries which they received in the past, only saving themselves from premature death by a timely flight. Many people who could comfortably prolong their lives by adopting this course fail to do so, and a still larger number find it impossible to leave their duties; but a sufficient section of the London population leave London in the fog time to interfere with the accuracy of the vital statistics. The economic effects of fog are not difficult to particularise, but the expenditure of money which they cause would not be easy to estimate. Everyone is familiar with the damage done to wearing apparel by fogs, and with the grave expense due to the increased necessity for the use of artificial light. To every householder in London during fog time a grave expense is caused, and the only gainers are the gas and electric light companies—the latter of which, it may be parenthetically observed, themselves contribute to no slight extent to the production of black fogs.

Everyone who has had experience of them will readily admit that London fogs are a nuisance which has no redeeming feature, and it is well to understand how they are caused and how they can be prevented or at least how their effects can be mitigated. There is no doubt as to the nature and causation of black fog. The blackness is caused by very fine particles of soot held in suspension in the aqueous vapour of the atmosphere. The particles of soot are unconsumed smoke. Sir WILLIAM RICHMOND, R.A., has estimated that as many as 6000 tons of coal were carried off in suspension in the atmosphere daily from the chimneys of London. We do not know how this estimate was arrived at, nor is such a numerical calculation of much practical value. It is enough for us to know that unconsumed black smoke is given off in large quantity from the London factories; that the volume of it is so immense that it is sometimes carried to great distances into the country, where its appearance and its smell are readily appreciable; and that, unfortunately for the people of London, under certain atmospheric conditions it occasionally remains near the site of its origin, causing a dense pall of darkness to cover the city. The chief factor which contributes to produce this condition is a still and moist air—that is to say, absence of strong wind—exposed to changes of temperature and pressure. What, then, can be done to prevent black fog? Under present conditions obviously no control over the wind can be exercised. The moisture of the London atmosphere cannot be suddenly diminished by human effort, but it may be mentioned that at present two large open spaces in the west of London—Hyde Park and Regent's Park—are insufficiently drained and give off much moisture. The way, and the only way, to prevent black fogs in London is to stop the emission of black smoke.

Black smoke is given off from the chimneys of many private houses and in a virulent degree from a huge number of factories. In the case of the smoke given off from factory chimneys the Public Health (London) Act, 1891, placed the control of the matter under the care of the metropolitan vestries and of the London County Council. At the present time the administration of the Act rests with the metropolitan boroughs, and in case of their neglect with the London County Council. The Public Health Act was an excellent and a far-reaching measure. Its provisions in regard to smoke are stringent, but they have never been properly carried out. If the London local authorities will simply perform the duties which have been entrusted to them they will earn the gratitude of the people. Up to the present time they have not done so, but it is not likely that they will be allowed to remain supine. On Wednesday afternoon last an influential meeting was held at Grosvenor House in connexion with the Coal Smoke Abatement Society, when the important motions, the text of which we have

already published in THE LANCET,[1] were passed unanimously. These resolutions recognise to the full, but without exaggeration, the varied and far-reaching mischief that follows upon the perpetual pouring into the London atmosphere of foul smoke. Sir WILLIAM H. BROADBENT testified to the physical ills that follow upon the respiration of such polluted air; Professor A. H. CHURCH, speaking as chemist to the Royal Academy, proved the damage wrought by coal smoke upon works of art; Sir WILLIAM THISTELTON-DYER, director of Kew Gardens, showed that vegetable life had in coal smoke a bitter enemy; Professor LODGE pointed out that to a great extent the remedy lay in the hands of the public who should insist upon the strict enforcement of laws for the prevention of the escape of coal smoke into the atmosphere; and Sir WILLIAM RICHMOND, R.A., president of the Coal Smoke Abatement Society, proved by facts and figures the work which the society has already done in putting down the evil. Not for the first time we bring the efforts of this young and energetic society to the notice of our readers. It is doing good service to the public health.

Annotations.

"Ne quid nimis."

MR. LONG ON THE METROPOLITAN WATER-SUPPLY.

ON Monday last, Nov. 18th, the Hon. W. F. D. Smith gave a dinner to the metropolitan Unionist leaders and to the executive committee of the Metropolitan Division of the National Union of Conservative and Constitutional Associations. The occasion offered Mr. Long an opportunity of making a speech on the London water-supply, for the matter being specially referred to by his host, Mr. Long's reply to the toast of his health was devoted to the subject. Mr. Long stated that he would bring in a Bill which, if passed, would constitute a new Authority which would undertake the administration of the water-supply of the metropolis and would purchase the business of the existing companies. It does not appear that he brought forward any arguments in favour or his purchase scheme. It will be interesting to those who are well informed as to the ins and outs of this complicated question—as every reader of THE LANCET may be presumed to be—to learn what form Mr. Long's proposals will take exactly.

LEAD-POISONING IN THE POTTERIES.

As we pointed out briefly in an annotation in THE LANCET of Nov. 16th, p. 1354, the new special rules proposed by the Home Office for further protecting the lives and health of the workpeople in the pottery trade have met with a varying fate in arbitration. We may now outline the practical effect of the decision of Lord James of Hereford. All the purely precautionary rules (with the exception of Rule VI., which would oblige adult male workers to submit to a monthly medical examination, and gives the certifying surgeon in their case the same suspending power which he already possesses in those of women and young persons) stand approved, and in some instances amended in a more stringent sense. On the other hand, the "process" Rules—the famous Rules I. and II. round which the battle has so long raged—are by the decision of Lord James of Hereford quietly shelved for 18 months at least. Manufacturers remain, consequently, for the present absolutely free from official interference as far as process is concerned; the use of raw lead is still permitted them, and the percentage of soluble lead yielded by their glazes is a matter for their own consideration and consciences. For the time at least their plea that the rules were unworkable must be held to have triumphed; and the Home Office manifestly failed to establish their case despite the strong representations contained in the reports of their chosen experts Dr. T. Oliver and Dr. T. E. Thorpe. Lord James of Hereford felt that he was not justified in deciding that regulations of a novel and drastic character should be forced upon an industry loudly protesting its inability to comply with them. He had before him the official admission that Rule II., in demanding so low a standard of solubility as 2 per cent., "asked too much," and foreign expert evidence which was tolerably satisfactory as to the possibility of exclusive fritting but gave a very uncertain sound on the solubility question, and the statistics showing a remarkable diminution in the cases of lead-poisoning from the time that the special rules of 1898 first introduced the compulsory use of fans for the removal of poisonous dust, the wearing of overalls, and better facilities for washing. But while he declared his determination not to interfere hastily with trade he also made it abundantly clear that he considered the questions of life and health involved in the inquiry to be his prime concern. He stated quite plainly that the merely palliative measures of fans and cleaner floors, on which the manufacturers' counsel insisted as remedies of themselves sufficient to stamp out plumbism, did not satisfy him though he was prepared to grant a further trial of their efficiency, and he urged upon employers the duty not only of doing everything to mitigate their workpeople's danger by improvement of buildings and strict conformity to rule, but of engaging in fresh researches with a view to reduce the quantity of raw lead at present in use and to attain in glazes a standard of solubility at least as low as that suggested by the Home Office. Lord James thus admits the desirability of reducing the amount of soluble or raw lead. The lead question cannot therefore be considered dead. So much for the rules opposed by the masters. Rule VI. was temporarily withdrawn likewise in deference to the objections of the men. Evidence tendered by representatives of union and non-union men alike gave proof of the fact that to the average working potter the terrors of suspension from work loom even larger than those of plumbism. The medical advantages of suspension being undoubted it is to be hoped that Lord James's earnest appeal in this connexion to the manufacturers to take upon themselves in some form the burden of the Workmen's Compensation Act will meet with a generous response, for in that case the men are ready to withdraw their objection. It is not the examination they dread, but the loss of their means of livelihood that may result from it.

ARE BURNING SHALE HEAPS A NUISANCE?

IT is not surprising to find that a burning shale heap has been ruled a nuisance considering that it gives off sulphurous and other gases detrimental to health, especially when the heap is in close proximity to dwelling-houses. Even in the country where quick diffusion is possible the effects may be noticed and are disgusting to passers-by. The Corporation of Oldham have recently obtained an injunction against a colliery company who deposited a large heap of shale in a thickly-populated part of the town. The heap has been on fire for several years, and the only way to get rid of it, so it is urged, is by allowing it to burn out. The case was heard in the Chancery Court of Lancashire at Manchester before Vice-Chancellor Hall, K.C., and the hearing occupied 10 days.

[1] THE LANCET, Nov. 16th, 1901, p. 1354.

Many witnesses were called on both sides, a great many for the colliery company. For the defence it was asserted that the fumes and smell were a cure for diarrhœa in infants and whooping-cough, but the Vice-Chancellor, in giving judgment, thought otherwise, and pointed out that a large number of witnesses were called who did not simply drive through the district, but lived and moved in it, and they said that the smell caused them to experience nausea and depression, that it obliged them to get up in the night to close their windows, and that it caused them to vomit in the morning. These people desired to rid themselves of something which caused sensible discomfort. The statement which had been made that the gases given off by the burning shale were healthy and appetising was absurd, and the defendants must have been very hard up for an argument to press it in court. There would be judgment for a perpetual injunction to restrain the defendants, their servants, and agents, from permitting any fumes, vapours, or gases to be emitted or to escape from their land to the nuisance or injury of the inhabitants of the county borough of Oldham or the other neighbourhoods of the said land, and the defendants must pay the costs of the action. We should have thought that it would be worth the while of the colliery owners to investigate the subject with a view not only of mitigating a nuisance but of utilising the definite calorific value which must necessarily exist in shale which is combustible.

MOTOR-CARS AND THE PUBLIC SAFETY.

HOWEVER strongly in favour of increased facilities of locomotion we may be the fact cannot be ignored that our present system of highways is not adapted for high speed. The present state of affairs brought about by the introduction of the motor-car is obviously a transitional one. Probably the horse will never be banished, but there can be no doubt that the motor-car is going to be something more than a mere passing fad or fashion. It threatens to compete even with locomotion by means of railways, and not only on economical considerations but also from the points of view of convenience and speed. The vigorous action on the part of some of our police authorities has naturally been strongly resented by motor-car enthusiasts, and no doubt in a great many cases this action has been unduly officious and vexatious. Still, it must be borne in mind that our highways are not adapted for high speed so long as so many sorts and conditions of locomotion exist. The pedestrian, the horse, and even the much-abused cyclist, are entitled to consideration. Some day, perhaps, motor-cars will have tracks of their own, each family will be its own railway company, and the "iron steed" as we now know it will be a mere historic curiosity. In justice, however, to a great number of persons who find pleasure and health in driving and riding on motor-cars it should be stated that many, at any rate, are desirous that the public safety should not be jeopardised, and we are quite sure that the rules drawn up by the Automobile Club protecting alike the motor-car traveller and the rest of the public, the former from abuse and the latter from risk, will everywhere be regarded with approval. The scorching cyclist was offensively in evidence at one time, but public opinion has very wisely hounded him down so that now he is quite the exception. In the meantime we do not see what reasonable objection can be raised to the motor-car on the road so long as it is kept within a speed consistent with public safety and so long as the driver evinces a consideration for others. As anyone participating in the annual meet of motor-cars which is held on the anniversary of the passing of the Locomotives on Highways Act soon discovers and appreciates, the motor-car may be controlled with marvellous precision. It can be steered and turned round in a much shorter space than can a horse and carriage, while it can be pulled up with greater certainty. Again, as shown by the events of the fifth anniversary, which was held on Nov. 16th, some 200 motor-cars can accomplish a journey of nearly a hundred miles without a breakdown or hitch of any practical importance or an accident of a serious character. On this occasion the largest number of motor vehicles that has ever assembled in this country was in readiness for the journey drawn up in single file in the Horse Guards Avenue, Whitehall, S.W. Before the actual start was made each driver was presented with a set of rules and regulations drawn up under the auspices of the Automobile Club which were to guide him through the day. Prominently among these were rules as to speed. It was laid down that in towns and villages the speed should be reduced to that of ordinary horse-drawn traffic. Further, the tour was divided into stages, and anyone completing these stages in less than the minimum time allowed was to be regarded as committing a serious breach of the club's rules. The minimum time was instituted to prevent a wilful and flagrant defiance of the law. The Organising Committee pleaded for hearty coöperation in making the run an event calculated to add to the popularity of the new form of locomotion. As far as could be ascertained the rules laid down were in the main carefully adhered to, and the result was a very successful tour, harassing to no one and enjoyed by all. Judging from the motor-cars participating in this tour it cannot be said that any very marked advance has been made during the past year in regard to improved methods of propulsion; the old drawbacks—noise, vibration, and smell—were still in evidence. By far the majority of the motor-cars were driven by petrol, some by steam, and a few by electricity. The first method has the advantage that it enables a great distance to be covered with but a small weight or bulk of fuel, while the second method involves stopping to take in a water-supply, and the third method is apt to give out when no means exist for replenishing the power. Some day perhaps liquid air will be cheap and then the ideal motor-car will be speedily realised.

THE ADVISORY BOARD FOR THE SUPERVISION OF THE ARMY MEDICAL SERVICES.

THE Secretary of State for War has selected the following as the chairman, vice-chairman, and members of the Advisory Board for the supervision of the Army Medical Services:—

Chairman.—The Director-General Army Medical Service, Surgeon-General William Taylor, C.B., A.M.S., M.D., C.M.

Vice-Chairman.—The Deputy-Director-General, Surgeon-General (temporary) Alfred Henry Keogh, C.B., A.M.S., M.D.

Members.—Officer R.A.M.C. (Expert in Sanitation), Major William Grant Macpherson, R.A.M.C., M.A., M.B., C.M., D.Ph. Camb.; Officer R.A.M.C. (Expert in Tropical Diseases), Lieutenant-Colonel David Bruce, R.A.M.C., M.D., C.M.

Civilian Members.—Dr. Charles Bent Ball (Ireland), M.D., F.R.C.S. Irel., F.R.C.S. Eng.; Alfred Downing Fripp, Esq., C.B., C.V.O., F.R.C.S., &c.; Dr. James Galloway, (Scotland), M.A., M.D., F.R.C.S., F.R.C.P.; Dr. Edwin Cooper Perry, M.A., M.D., F.R.C.P.; Sir Frederick Treves, C.B., K.C.V.O., F.R.C.S.

Representative of the War Office.—Colonel W. A. Dunne, C.B., Assistant Quartermaster-General.

The Representative of the India Office and the Matron-in-Chief are to be nominated hereafter.

It remains to be seen as a matter of practical experience how an Advisory Board of this size and mixed character will work for the good of the public service, but we do not see that it need necessarily interfere with the status or lessen the influence of the Director-General, who will not only act as the chairman of such Advisory Board, but, what is much more important, according to the newly constituted scheme of War

Office administration will in future occupy a place on the War Office Council and Army Board and will be a recognised official on the head-quarters staff with direct access to the Secretary of State for War. He will have the civil medical profession at his back in any measures which he may have to put forward or in any representations which he may have to make regarding the sanitary and medical requirements of the army. It should therefore strengthen his position. It is rather in regard to the suitability of the machinery and its workability and as to the technical knowledge, experience, and special business qualifications which the civil members of the Advisory Board may bring to the task that we entertain misgivings. It cannot be said that the results of our experience of large mixed boards or committees are altogether satisfactory where directness of aim as well as promptitude and clearness of decision in the practical conduct of public business are concerned. Nor is it easy to fix the responsibility of failure or neglect on anyone under such circumstances. While we heartily sympathise with any attempt to secure the coöperation of the military and civil elements of the profession in carrying on the public health and medical work of the country, we cannot help feeling that the provision of so many boards and examinations are not likely to furnish the simplest and most efficient method of getting what is wanted in the way of War Office, or army medical, reform. It is greatly to be regretted, as we have urged from the first, that when Mr. Brodrick took the reorganisation of the Army Medical Service in hand he did not nominate some medical officer of high rank, experience, and recognised ability belonging to that service to act as a member of his committee. To refer to only two points—and there are others—no new scheme for the Army Medical Service is likely to prove attractive which requires so many examinations to be passed and which interferes or does away with the right to retire on the present terms after 20 years' service.

"THE VIOLET CURE."

A PARAGRAPH has been going the round of the press, describing how a tumour of a tonsil, the diagnosis of which was "made certain by microscopic examination of a small portion removed," was "cured" by the application of a number of fomentations made from an infusion of green violet leaves. The patient, in gratitude for her recovery, has had printed some leaflets describing the mode of preparation and application of this infusion. We can fully enter into her feelings. She had suffered greatly for four months from a throat affection which was relieved by no treatment. She grew steadily worse and her life was despaired of. The diagnosis of "cancer" seemed to be confirmed by microscopic examination. Within a week of the application of infusions of violet leaves much of the swelling had disappeared and all pain had ceased, and in a fortnight the "cancer" of the tonsil had entirely disappeared. Overjoyed at her own recovery she hastens to make known to other sufferers the marvellous and simple method of treatment, ignorant that already many hopes of recovery have been founded on similar unsubstantial basis. The whole importance of the story depends on the accuracy of the diagnosis of epithelioma. All who are familiar with the clinical signs of a malignant disease of the tonsil can easily believe that it is not difficult to mistake deep-seated inflammation of the region for a malignant growth. As to the microscopic examination, the arrangement of the epithelium of a normal tonsil may easily resemble the epithelial down-growths of an epithelioma, and the resemblance is still more striking when chronic inflammation is present. The history of the case points to a very natural error of diagnosis. The violet leaf, by the way, figures not infrequently among the recipes of the old Anglo-Norman writers whose manuscripts are preserved in the British Museum. In modern pharmacopœias the violet is noted for its cathartic and emetic qualities, or, to speak more accurately, the *Viola tricolor*, or pansy, possesses these useful attributes. The dog violet also is vaguely recorded in an old edition of Balfour's "Botany" (1854) to have been at some time or other prescribed for "skin disease." In the age of the Plantagenets monkish medical writers treated most diseases with the violet, whether dog, pansy, or sweet March they do not state. Intermingled with a multiplicity of other ingredients the modest flower was used to treat "a streytness of the hert," an illness akin, we may suppose, to dyspepsia. It was said to be good also for the stone, and if a broken fragment of bone had to be expelled from the flesh the violet, with other herbs, was considered most useful. Into these old medical mixtures the violet was always introduced in "a good handful," and we are at liberty to suppose that its pleasant perfume, in an age when contrasts were much insisted on, was supposed to work wonders against noisome suppurative ailments. The Anglo-Norman writer of Manuscript B in Henslow's valuable account of early English recipes gravely mentions that a decoction of violet leaves, in conjunction with several other herbs, will enable a sufferer to slay the worm in a sore after its presence has been duly discovered by the all-night application of a piece of new cheese. The violet leaf, according to the same forgotten scribe, whom Professor Skeat pronounces to have been a Norman-Kentish man unfamiliar with English, is useful in the process of wound-healing, but the mediæval authorities never thought of "curing canker" by means of violets. Nor do we think that such a method of therapy will find a place in twentieth-century pharmacology.

AN OUTBREAK OF NOMA.

NOMA is now seldom observed. Dr. W. H. Allchin states that during 13 years only six cases were seen in 13,000 patients admitted to the Hospital for Sick Children, Great Ormond-street. It occurs in children suffering from acute disease when the sanitary condition is bad. Osler claims that at least one-half the cases occur during convalescence from measles. The *American Journal of the Medical Sciences* for November contains a report by Dr. G. Blumer and Dr. A. MacFarlane of a remarkable outbreak which occurred in April, 1900, at the Albany Orphan Asylum, an institution which accommodates 450 children varying in age from two to 15 years. An outbreak of measles of a severe type occurred and 173 children were affected. 32 had complications: 12 had pneumonia, five had pneumonia and noma, 11 had noma without other complication, and four had lesions which were considered incipient noma but in which the process was stopped by cauterisation. Of the 12 cases of pneumonia two were fatal, the five cases of pneumonia and noma were all fatal, and two of the uncomplicated cases of noma were fatal. Of the 16 cases of noma the mouth alone was affected in four, the mouth and other parts (the ear and vulva) in three cases, the vulva alone in seven, the vulva and other parts in seven, the rectum alone in three, and the rectum and other parts in five. Of the fatal cases of noma the mouth was involved in three and the rectum in four; pneumonia was the immediate cause of death in five of these cases. The ages of the affected children ranged from three to 12 years. No predisposing cause of the disease could be found in the surroundings; the general hygienic and dietetic conditions were excellent, and the average annual mortality of the institution was only 19·4 per 1000. Although there were almost as many cases of measles in boys as in girls, all the cases of noma developed in the girls' dormitory except two in boys who were in the infirmary at the same time as

were girls suffering from noma. The first case was detected by the putrid odour from a patient with noma of the vulva. The process rapidly extended to the rectum with destruction of the intermediate tissues. The other cases occurred in this dormitory; contagion by soap or towels was possible. Complete isolation stopped the outbreak. The disease began with slight ulceration and a surrounding area of intense hardness. This quickly became dark and broke down. The process in some cases spread with alarming rapidity; the tissue appeared to necrose *en masse*. When the destruction was not too extensive the application of Paquelin's cautery under chloroform seemed to arrest the gangrene. Nine cases were examined bacteriologically. Only one organism was constantly present in cover-slip preparations—a leptothrix which averaged $\frac{1}{2}\mu$ in breadth and varied from five to 20 μ in length. The short forms were usually bent, the long ones curled or wavy. In older medical literature accounts of outbreaks of noma in institutions may be found. Savard saw an outbreak at the Hôtel Dieu, Paris, in 1699, and Martin has described one at the Charity Hospital of Lyons in 1796. The contagiousness of noma has been denied, but Loschner observed in the Lazarus Children's Hospital, Prague, the repeated recurrence of noma in one room.

THE DIAGNOSIS OF SMALL-POX.

WE have already drawn attention to the difficulties which may occur in the diagnosis of small-pox.[1] An early diagnosis is of the utmost importance in order to prevent infection, but so long a time has elapsed since the last serious outbreak in London that many practitioners have had no experience of the disease, thus mistakes in diagnosis are likely to occur. Moreover, small-pox may be so modified by previous vaccination that its recognition it not easy. In order to overcome these difficulties the St. Pancras Borough Council have adopted the plan of appointing a medical man as a medical referee in each ward, to be called in by the practitioner in doubtful cases of small-pox or suspicious eruptions or symptoms, the Council having previously resolved that after Oct. 5th chicken-pox should also be a notifiable disease within the borough. A medical referee is not to be prohibited from making a clinical examination beyond the ward for which he is appointed, provided that the patient is within the borough of St. Pancras and that a medical referee sends to the medical officer of health an additional or second notification form, or similar certificate, filled in and signed by the medical referee and countersigned by the medical practitioner calling him in. Medical practitioners are also requested to state upon their certificates both of chicken-pox and small-pox the number, approximate collective area, and distinctness of foveation of vaccination marks existing on the patient. We consider this departure an excellent one, and it might with great advantage be followed by the councils of other metropolitan boroughs.

LESIONS OF THE SPINAL CORD AS REGARDS PROGNOSIS AND TREATMENT.

AN interesting discussion on Traumatic Lesions of the Spinal Cord as regards Prognosis and Treatment took place before the New York Neurological Society and is reported in the *Journal of the American Medical Association* of Nov. 2nd, 1901. In opening the discussion Dr. George Walton of Boston stated that in complete transverse crushing of the spinal cord there were "total flaccid paralysis below the seat of lesion (Bastian)" and loss of the knee-jerks. In partial crushing there was irregular paresis more or less in the lower limbs, while anæsthesia was incomplete in the affected members, whereas in complete crushing anæsthesia was complete. Retention of the urine was the rule in all varieties of fracture of the spinal cord. The skin below the seat of lesion grew hot (vaso-dilatation), but sweating was not a common symptom. The prognosis varied. In cases of fracture of the cervical portion of the cord the prognosis was very grave and death usually resulted in a few days if no operation had been performed. In dorsal or lumbar fracture the prognosis was better but was still grave, "the fatality in non-operation cases being about 80 per cent." Laminectomy was thought to be dangerous by reason of the weakening of the spinal column which it produced, but this was not so. "Owing to the decided limitation of our diagnostic ability," said Dr. Walton, "it was well to resort promptly to operation in all cases except the moribund and those with great displacement and give the patient the benefit of the doubt." The dural theca should be opened because an œdema of the pia arachnoid was apt to exist and would be relieved by such a procedure, but the chief reason was the opportunity it afforded for inspecting the spinal cord. Drainage was not necessary, and the theca should be sutured at the close of the operation. Professor Charles Dana believed that operation was safe; he had not met with a fatal case in six operations. If clinical observation showed that the spinal cord was undoubtedly crushed he thought operation need not be advised. Dr. Edward Fisher mentioned two cases of fracture of the spinal cord in which cocaine anæsthesia was employed because of fear to give the patient a general anæsthetic. The operation was concluded without any more shock than in general anæsthesia. Dr. Graeme Hammond said that in mild cases operation was very successful and cited an instance where complete and permanent cure followed. He would also operate in hopeless cases because nothing else could be done. Dr. Sachs agreed with the previous speaker as regards the importance and necessity of operation. Dr. George Brewer mentioned a case of a woman who had sustained injury to the cord and spinal column in which a fragment or spicule of bone was embedded in the spinal cord and where complete recovery followed laminectomy and removal of the fragment of bone.

VEXATIOUS LITIGATION.

DR. R. A. G. F. DOWDALL, surgeon at Mountjoy Prison, Dublin, is to be congratulated on the result of an action brought against him by the wife of one of the prison officials whom he attended in his official capacity, and the Recorder of Dublin is also to be congratulated on having expressed himself, in giving his decision, in terms which may tend to discourage in Dublin, at all events, similar actions against medical men. The wife of John O'Reilly, prison teacher and librarian at the prison, fell downstairs at about 11 o'clock P.M. on Feb. 22nd and injured her shoulder, and on the following morning called in Dr. Dowdall. The arm was too much swollen for any satisfactory diagnosis, and he recommended her to go to the Mater Misericordiæ Hospital. This she declined to do and he accordingly prescribed suitable treatment and waited. During the next three weeks he attended her, expressing the opinion that she was suffering from rupture of the muscles and from rheumatism. Finally she went to the hospital, as Dr. Dowdall had originally advised her to do, and there it was discovered that the shoulder was dislocated, while the Roentgen rays further revealed an impacted fracture of the neck of the bone in addition to the dislocation. Suitable treatment and operation followed, and subsequently Mrs. O'Reilly and her husband brought an action against Dr. Dowdall on the ground that his negligence had caused her undue suffering. The evidence, however, called by the plaintiffs did not bear

[1] THE LANCET, Oct. 12th, 1901, p. 988.

out their contention. Their own witness, the surgeon who made the diagnosis at the hospital and operated on the shoulder, at once stated in cross-examination that up to the time when the case came under his charge any other treatment than that adopted by Dr. Dowdall would have been out of the question, and that correct diagnosis when Dr. Dowdall was first called in, on the morning after the accident, must have been extremely difficult. For the defence Dr. Dowdall told his own story and was supported in every particular by Dr. Thomas Myles, President of the Royal College of Surgeons in Ireland. In giving his decision, with emphasis, for the defendant the Recorder pointed out that medical practitioners can only be held liable for mistakes caused by negligence and not for errors of judgment, while he dwelt on the fact that the plaintiff had been advised to go to the hospital and had refused to do so. He also pointed out that she was attended free of charge in consequence of her husband's official position, and said that in his opinion the poorer classes in the city of Dublin were so absolutely pampered with medical assistance that anything like grace or gratitude to the medical profession was absolutely gone from them. This is a state of affairs not peculiar to Dublin, but that an official in a Government institution such as a prison should bring an action against the surgeon officially appointed to attend its inmates is unusual, and in any case highly undesirable. Brought without good cause and in circumstances which foredoomed it to failure, such an action strikes us as vexatious and inconsistent with the discipline necessary to the proper conduct of such institutions.

TICK FEVER.

IN the *Australasian Medical Gazette* of September Dr. Frank Tidswell, principal assistant medical officer to the Government of New South Wales, describes an experimental inquiry into the disease of cattle known as "tick fever" or "red water." The pathology of this disease closely resembles that of the malarial fevers of man and is therefore of considerable interest. Tick fever is widely distributed throughout the world and occurs in Australia, Texas, the Argentine Republic, South Africa, Turkey, Italy, France, Finland, and probably in other places. It is communicated to cattle by insects known as "ticks." They are hatched from eggs laid on the ground. The larvæ are no bigger than pins' heads, have six legs, are very active, and swarm about the grass endeavouring to attach themselves to cattle. They bore into the skin, where they go through several developmental stages, becoming eight-legged and sexually mature. After about three weeks they fall to the grass and lay eggs and so complete the cycle of development. Apart from "tick fever" the incessant onslaught of ticks on cattle affects the health and may produce serious and even fatal illness. Ragged ulcers form and may become fly-blown and gangrenous. Secondary effects are produced on the animal's health by the impeding of movements and the interfering with the search for food and by blood-poisoning. But the important consequence is tick fever. It begins from 10 to 20 days after the exposure of the cattle to ticks and lasts from eight to 15 days, during which the temperature varies between 103° and 107° F. The animals become dull and cease to move about and when very ill lie down. After six or seven days they are anæmic. The fever is due to a hæmatozoon, *pyrosoma bigeminum*, which is inoculated into cattle by ticks. It is found in the red corpuscles usually in the form of a bigeminate or pear-shaped organism. The red corpuscles are destroyed and may be reduced in 24 hours from 7,000,000 or 8,000,000 to 1,000,000 per cubic millimetre. The liberation of the hæmoglobin may produce hæmoglobinuria ("red water"), but this symptom is not, as is supposed, common. Young ticks hatched from females kept in glass boxes have produced the fever, but the experimental injection of emulsions of eggs or of young ticks has failed to do so. Hence the inference that the parasite undergoes within the ticks some evolutionary process previously to acquiring infective qualities for cattle.

THE MEDICAL PROFESSION AND THE PUBLIC VACCINATOR.

WE are requested by the Association of Public Vaccinators of England and Wales to publish the following statement:—

The Organising Secretary of the Association of Public Vaccinators on his own initiative inserted the notice in the *Standard* of which you complain.

At a meeting of the Executive Committee held on Nov. 20th his action and the notice were considered. It appears to the committee that the Secretary's action was based upon a desire to instruct the public as to the facilities for revaccination provided by law. It strongly objects to the interpretation which you place upon the notice—i.e., of serving the purposes of advertisement and misrepresentation.

The Organising Secretary is a layman and the last person in the world to desire the encouragement of advertisement, but he felt that it was necessary to give instruction to the public, because, from facts within his own knowledge, many persons were not seeking the operation on account of the expense, and in many cases the guardians have neglected to publish the information to which the public are entitled at their hands.

The Executive Committee disclaims any idea of the communication to the *Standard* being anything in the nature either of a proclamation or circular. It was simply a notice to the public giving them information true in substance and in fact. The Executive Committee admits that if the third paragraph had been submitted to it the wording would not have been precisely the same, and would probably not have raised any adverse comment. It regrets that a strained interpretation should have been placed upon what was honestly intended to be a perfectly innocent communication to the press in the public interests.

We publish this somewhat lame explanation of how an indiscreet *communiqué* to the public press came to be sent out. We wish to point out that the interpretation put upon the circular was not put upon it by us alone. We endorsed the views of many of our readers and apparently have expressed those of the Executive Committee. We recommend the Executive Committee of the Association of Public Vaccinators of England and Wales not to allow a lay secretary to write to the press in their name, even though he "is the last person in the world to desire the encouragement of advertisement."

THE METROPOLITAN WATER-SUPPLY.

THE report on the condition of the Metropolitan water-supply during the month of September has recently been issued by the Water Examiner to the Local Government Board. The most interesting thing in the report is, perhaps, the information which it gives as to what appears to be a hardship inflicted on some of the old customers of the New River Company. The hardship consists in the fact that they are no longer supplied entirely with water purified by that company, but by a mixture of New River water with some supplied by two other companies. The result of the mixture is that the customers of this old-established business now have water which is of a quality inferior to that to which they have been long accustomed and which has not been prepared under the careful supervision of the officials of the company. The reference to the falling off in the quality of the New River Company's water is thus referred to in the report of Dr. T. E. Thorpe, the analyst to the Local Government Board. "With regard to the Lee-derived waters the New River Company's water on a few occasions was found to contain somewhat more organic matter than usual, but from information supplied by the secretary of the company it appears that these abnormal results were due to an admixture of filtered Thames water, this being necessary in connexion with the arrangements whereby the East London Company has been assisted during the past month." On reference to the table included in the report which gives the "details of the Metropolitan water-supply" it is seen that the adventitious water which contaminated the New River water was supplied by the Grand Junction and the West Middlesex companies. Dr. Thorpe, it may be suggested, hardly does justice to the sources of supply of the New

River Company in indiscriminatingly applying the term "Lee derived" to them, for although of the two springs whose water Myddelton originally undertook to convey to London, one, that of Amwell, has ceased its supply and the other, that of Chadwell, has steadily diminished in quantity, it must be remembered that the wells near the New River enormously increase the bulk of the "Lee-derived" water which it conducts. During the month under review for example, the daily average amount of water derived from the Lee was 18,623,920 gallons, and that from springs and wells was but little less—namely, 16,328,388 gallons. The water supplied during the month by the East London Waterworks Company was derived from many sources. The average daily supply was 44,329,000 gallons and this amount was obtained as follows: from the Lee and the storage reservoirs, 9,928,264 gallons; from the Thames, 19,317,000 gallons; from wells, 11,799,000 gallons; from "wells per New River Company," 1,740,736 gallons; and from Hanworth springs, 1,544,000 gallons. The "springs" are situated under a layer of London clay and the water is mixed with some of the Thames-derived water at Hanworth. Some of the Thames-derived water was obtained from the Southwark and Vauxhall Company—the average daily amount "passed on" by this company was 10,404,000 gallons, and from the 1st to the 18th of the month the New River, the Grand Junction, and the West Middlesex companies aided in affording the supply. This consummation is the result of the carrying out of the intercommunication scheme recommended in the first report of Lord Llandaff's Commission on the lines of which an Act of Parliament was immediately passed in spite of the opposition of the majority of the London County Council. The greater part of the report presents no features of remarkable interest. The Thames water was in good condition during the month; its height varied from three inches above to six inches below the average summer level. The rainfall at Molesey amounted to one inch. The customers of the Lambeth and of the West Middlesex companies are credited with having taken more, and those of the other companies with having taken less, water per head than during the corresponding month of last year. The water supplied by the Lambeth Company exhibited the deepest average tint of brown. A sample drawn from the mains of the West Middlesex Company contained a higher proportion of organic carbon than that found in any other supply examined by Dr. Thorpe. In the case of the metropolitan companies in one only is the report invariably satisfactory. "The Kent Company's deep well water was as usual clear and of excellent quality." There are, we believe, still living experts who profess to prefer river water. It may be hoped that soon this opinion may be confined to experts.

THE CONTROL OF MILK-SUPPLIES.

EVIDENCE daily accrues that the supply of milk is not so effectively under control as in the interests of the health of the community it should be. Last week we pointed out in a leading article that some better machinery for excluding infective milk from London is obviously needed in the face of the facts then quoted in regard to the spread of scarlet fever through an infected milk-supply. That this is so is abundantly clear from the fact that it is not contrary to law to supply a particular milk in other districts when the supply has been stopped in one district. It would certainly be an advantage if the milk taken under the Food and Drugs Act could be examined bacteriologically as well as in regard to its quality, but we fear that such a course would entail more work upon the public analyst than he is able to do and many analysts are not competent to do it. Of course, this additional procedure would add considerably to the expense of analysis. It is often said that they do things better in America than we do in this country. This is certainly true in the case of the method employed in Chicago for preventing the adulteration of the milk-supply there. By a recent plan pursued by the Department of Public Health an improvement of nearly 24 per cent. in the quality of the milk-supply of that city has been effected. This has been done by furnishing to the public press the names and addresses of delinquent milk-dealers—a method which vividly recalls that of the Founder of this journal when he published the names and addresses of unscrupulous people in THE LANCET. We wish that the method could have been revived in this country, as was suggested, in the new Food and Drugs Act, but worse counsels prevailed. Yet in Chicago it is found that the publication of the names and addresses of fraudulent tradesmen regularly in daily papers has a more deterrent effect than have prosecutions and fines. Again, any milk of a specific gravity of 1027 or giving the test reaction for formalin was forthwith carried to, and emptied into, the nearest sewer opening. As a result "embalmed" milk was no longer found at the receiving depôts and very few cans of watered milk were received. The policy may appear to be somewhat drastic, but it is certainly fully justified in the case of milk if in regard to no other article of food.

THE ANTITOXIN TREATMENT OF DIPHTHERIA AT LEICESTER.

THE Leicester Corporation has undertaken to supply diphtheria antitoxin free of charge and the effect upon the diphtheria mortality has been most gratifying. The use of antitoxin vexes the soul of Mr. J. T. Biggs, the well-known anti-vaccinationist, and he has published a long letter in the *Weekly Times and Echo* of Sept. 22nd and in the *Leicester Daily Mercury* of Nov. 2nd to prove that antitoxin, or the introduction of sewers, or the enforcement of vaccination (we are not quite sure which) has increased the number of cases of diphtheria and has also increased the case fatality. Here are the figures as given by Mr. Biggs for the years 1890 to 1900 inclusive:—

Year.	Cases.	Deaths.	Fatality, per cent.	Total number of cases.	Total number of deaths.	Annual average fatality, per cent.
1890	75	11	14·6		Prior to antitoxin	
1891	65	14	21·5			
1892	67	10	14·9	412	66 [*sic*]	16·7
1893	139	20	14·4			
1894	66	12	18·1			
1895	75	36	48·0		Antitoxin period	
1896	170	53	31·2			
1897	229	73	31·9	1568	447	32·8
1898	218	63	28·9			
1899	906	222	24·5			
1900	1452	316	21·7			

According to these figures the use of antitoxin commenced in 1895 and the case fatality rose from 18·1 in 1894 to 48 per cent. in 1895. But, as Mr. Biggs says in another table, antitoxin was "more completely practised," and the fatality case-rate, which in 1895 was 48 per cent., steadily declined, except that in 1897 it was 31·9 as against 31·2 in 1896, to 21·7 in 1900. Mr. Biggs quotes various passages, for most of which he does not give the references, to show that antitoxin does not influence the course of the disease in a favourable way as regards diphtheria. We can give him some figures and references to show exactly the opposite, and in doing so we give him an opportunity of verifying our figures. The Diphtheria Committee of the Clinical Society of London has published a report upon 832 cases.

Of these 199 were rejected because the committee either thought that the evidence of diphtheria was not sufficiently strong or because the amount of antitoxin administered was not stated in normal units. There were thus 633 cases available for estimation. The total number of deaths was 124, or 19·5 per cent., as opposed to a mortality of 29·6 per cent. in a control series compiled from the records of the general hospitals before the introduction of antitoxin. Buchwald in the *Münchener Medicinische Wochenschrift*, 1898, No. 14, says that of 563 cases treated without antitoxin, 57·72 per cent. died; of 311 treated with it, 28·93 per cent. died. J. E. Walsh in the *New York Medical Journal*, June 18th, 1898, published the following figures. In 1895–1896 there were treated in the District of Columbia: cases with antitoxin, 174; deaths, 23; mortality, 13·2 per cent.; cases without antitoxin, 152; deaths, 53; mortality, 34·9 per cent. In 1896–1897: cases with antitoxin, 285; deaths, 21; mortality, 7·3 per cent.; cases without antitoxin, 335; deaths, 89; mortality, 26·6 per cent. Unkindest cut of all, one Biggs, not J. T., but H.—undoubtedly Hermann, the well-known sanitarian of New York—has read a paper before the Society of the Alumni of the Bellevue Hospital in which he said: "Since the introduction of antitoxin treatment the mortality of diphtheria is reduced to one-half."[1] We also refer Mr. J. T. Biggs to various articles and figures which have from time to time appeared in our columns; notably to a paper by Mr. J. R. Russell and Mr. Arthur Maude, which appeared in THE LANCET of Nov. 7th, 1896, p. 1298, and contained a record of 17 cases without a death, 15 of which were treated with antitoxin; and also to one by Dr. Louis Cobbett, which appeared in THE LANCET of Dec. 3rd, 1898, p. 1457. We note that Mr. Biggs wisely says: "I enter upon the pathological aspects of the question with fear and trembling." Mr. Biggs may well do so, for he goes on: "In a series of experiments by Dr. Whitbridge Williams in at least 75 per cent. of healthy persons the bacillus [*sic*] of typhoid, tetanus, diphtheria, and puerperal fever were found. The fact is these minute creatures are benign and do not become malign until affected by the morbid poisons of these animal serums." Does this mean that everyone who becomes ill from typhoid fever, tetanus, diphtheria, or puerperal fever has been injected with antitoxin? If not, what does it mean? We adjure the Leicester Corporation to continue to supply antitoxin serum, at any rate until some one furnishes them with the ghost of an argument against its efficacy. That Mr. Biggs has not done this is sufficiently proved by Dr. Horton Davies's admirable reply to Mr. Biggs in the *Leicester Post* of Nov. 16th.

[1] Quoted by Jacobi, Twentieth Century Practice of Medicine, vol. xvii., 1899, p. 118.

THE JOURNAL OF OBSTETRICS AND GYNÆCOLOGY OF THE BRITISH EMPIRE PUBLISHING COMPANY, LIMITED.

THE first number of the *British Journal of Midwifery and Diseases of Women*, a periodical to be devoted to the consideration of the obstetrics and gynæcology of the British Empire, will make its appearance with the new year. The editor-in-chief will be Mr. Alban Doran, with whom will be associated Dr. Berry Hart, President of the Obstetrical Society of Edinburgh; Dr. F. W. Kidd, Professor of Obstetrics and Gynæcology in the Royal College of Surgeons in Ireland; and Dr. W. J. Sinclair, Professor of Obstetrics and Gynæcology, Owens College, Manchester; and collaborators distributed through the colonies and dependencies. The publishers will be Messrs. Baillière, Tindall, and Cox. The promoters of the new journal are showing their modernity by constituting themselves a limited liability company, the prospectus of which will be shortly issued. As the promoters number among them, in addition to the names already mentioned in connexion with the editorial department, *Sir John Williams, Bart., Emeritus Professor of Obstetrics, University College, London; *Dr. F. H. Champneys, obstetric physician to St. Bartholomew's Hospital; *Dr. G. E. Herman, obstetric physician to the London Hospital; Dr. Peter Horrocks, obstetric physician to Guy's Hospital; Dr. R. P. Ranken Lyle, Lecturer on Obstetrics and Gynæcology, University of Durham; *Dr. W. J. Sinclair, Professor of Obstetrics and Gynæcology, Owens College, Manchester; *Dr. Edward Malins, Professor of Obstetrics, University of Birmingham; Dr. Murdoch Cameron, Professor of Midwifery and Diseases of Women, University of Glasgow; Dr. J. A. C. Kynoch, Professor of Midwifery and Diseases of Women, University of St. Andrews; *Dr. A. R. Simpson, Professor of Midwifery and Diseases of Women, University of Edinburgh; Dr. William Stephenson, Professor of Midwifery and Diseases of Women, University of Aberdeen; and Dr. John W. Byers, Professor of Midwifery and Diseases of Women, Queen's College, Belfast, the medical profession has a good guarantee that the undertaking is in thoroughly first-class and representative hands. The first directors will be those of the promoters to whose names we have affixed an asterisk. We make no further comment until the prospectus is published save that we wish the new venture prosperity.

PRESERVED SHRIMPS.

IT appears that shrimps are imported into this country from Holland and that borax is used in somewhat large quantities in order to preserve them. A shrimp-dealer of Morecambe has recently been summoned for selling such shrimps on the ground that they were unwholesome, apparently because they were preserved with borax. The prosecuting solicitor said that he looked on this as a test case. Mr. Williams, county analyst, said that the samples which he had examined contained 95 grains of borax to the pound. Mr. E. Sergeant, medical officer of health to the Lancashire County Council, and Professor Rubert W. Boyce said that borax was injurious to health. The expert evidence given in the case referred to the possibly injurious effects of the borax without regard at all to the question as to whether apart from borax the shrimps were wholesome. It was stated that the borax kept the shrimps unchanged in appearance for months. Doubtless the addition of borax was, in one sense, desirable in preventing the shrimps from becoming poisonous by undergoing putrefactive change. For the defence it was urged that the dealer never sold shrimps in this way before, but soaked them in salt-and-water for eight hours and then boiled them. The question arose as to how much of the borax would be removed by this treatment, but none of the witnesses could give any definite information on the point. It would be well if some experiments were made to determine this. Mr. Spilsbury of Birmingham, an analytical chemist, said that he did not consider that the amount of borax was excessive or that any less quantity would effectually preserve the shrimps. Mr. A. S. Barling, honorary surgeon to the Royal Lancaster Infirmary, said that he had given boric acid and borax in doses of 60 grains daily to numbers of patients and had not noticed any ill-effects. Previously to the cooking of the shrimps the borax might possibly be good in destroying sea-shore organisms, which often enough include sewage organisms. Curiously enough, we recorded some time ago a number of cases of acute poisoning due to the consumption of shrimp paste which occurred at St. Anne's-on-Sea, near Blackpool, which is not very far from Morecambe. Possibly the Dutch shrimps may

throw some light on these cases. It is, at any rate, a somewhat remarkable coincidence that poisonous shrimp paste was seized near Blackpool some years ago and that quite recently preserved Dutch shrimps should be found to have been imported into Morecambe. The bench found the defendant guilty and imposed the maximum penalty of £20 and costs. In view, however, of what we have pointed out the matter should not be allowed to rest at this stage.

THE DISTRIBUTION OF PLAGUE.

A TELEGRAM from the Governor of the Cape of Good Hope received at the Colonial Office on Nov. 13th states that for the week ending Nov. 9th the only cases of plague at the Cape occurred at Port Elizabeth. They were as follows: Europeans, 1; natives, 4. The deaths were all at Port Elizabeth and numbered Europeans, 1; natives, 2. The area of infection remains unchanged. The cases of plague in persons under naval and military control were natives, 1, at the Remount Camp, and natives, 1, at the South Military Camp, Port Elizabeth. As regards the Mauritius, a telegram from the Governor received at the Colonial Office on Nov. 15th states that for the week ending Nov. 14th there were 83 cases of plague and 56 deaths. Clean bills of health have been issued at Liverpool.

THE REPORT ON THE CONCENTRATION CAMPS IN SOUTH AFRICA.

A REPORT on the Concentration Camps in South Africa has been issued as a blue-book by the Colonial Office and is welcome while there is so much serious discussion of the management of, and mortality in, these places of refuge. The blue-book deals exhaustively with the camps in the Transvaal, and contains many interesting statistics concerning the camps at Natal, Cape Colony, and Port Elizabeth. No one can read its contents without seeing at once that those responsible for the management of the camps have had to contend with an enormous amount of ignorance and ingrained habits, in themselves sufficiently insanitary to cause a high death-rate. When we remember that over 65,000 refugees in the Transvaal and over 31,000 in the Orange River Colony up to August and June of this year respectively have been housed, fed, and clothed by our Government while active war preparations were also being carried out in this country, while a large army was being fed, and when the provision of transports for military necessities was stretched to the breaking point—when all this is remembered the wonder is not that the mortality has been high, but that it has not been higher. As far as we can see, everything that can be done for those in our charge has been done, or is being done, by the authorities, but the difficulties in the way of proper administration are very great.

A DOUBLE STAIN FOR THE BACILLUS DIPHTHERIÆ.

VARIOUS staining methods have been devised to demonstrate and study the structure of the bacillus of diphtheria. It is stained best by Löffler's solution of aniline blue. There are several methods which will produce a double stain; Professor Neisser, for instance, has devised a stain which colours the protoplasm brown and the chromophilic points blue-black. In a reprint from the *University of Pennsylvania Medical Bulletin* Dr. R. L. Pitfield, assistant bacteriologist to the Pennsylvania State Board of Health, describes a method which has the property of sharply differentiating the diagnostic features of the Klebs-Löffler bacillus and also renders it easy to see that the chromatin points are of a substance different from the rest of the protoplasm. Three solutions are required: (*a*) silver nitrate, five grammes; distilled water, five cubic centimetres; and saturated alcoholic solution of fuchsin, three cubic centimetres; (*b*) pyrogallic acid, one gramme; 10 per cent. sodium hydrate in water, five cubic centimetres; and distilled water, 10 cubic centimetres; (*c*) carbol fuchsin solution, 10 drops; and distilled water 10 cubic centimetres. After a glass slide or cover-glass has been prepared from the material to be examined the film should be fixed with heat, and a small quantity of solution (*a*) poured on, heated to boiling, allowed to remain on for one minute, and then washed off. The specimen is then treated in the same manner with solution (*b*), and finally a small quantity of solution (*c*) is poured on, allowed to remain for two minutes, and then washed off and the glass allowed to dry. On examination the organisms will appear of a delicate pink colour of slightly uneven shades, corresponding to the density of the protoplasm. At one or both ends, and often in the middle, brilliantly shining black points appear, which stand out very sharp and clear. The cell membrane stains a grey-brown of very light shade. Dr. Pitfield states that the morphology of the diphtheria bacilli varies greatly. In organisms of very low virulence he has observed that the bacilli exhibit these points at the very ends of the rod; they appear simply attached; there may be a small point in the middle. Other bacilli of greater virulence show these points well within the protoplasm, but yet strictly polar as to their position.

SMALL-POX IN LONDON.

THE returns of small-pox for the current week show an increase so far over last week. On Saturday, Nov. 16th, 21 fresh cases were notified. On Sunday, the 17th, 11 fresh cases were notified; on Monday, the 18th, there were 35 fresh cases; on Tuesday, the 19th, there were 28 fresh cases; and on Wednesday, the 20th, there were 18 fresh cases. At a meeting of the Marylebone Board of Guardians on Nov. 18th questions were asked of the chairman whether he could tell the meeting the proportion of vaccinated persons who had died in the Metropolitan Asylums Board hospitals during the present outbreak. The chairman, who is also chairman of the General Purposes Committee of the Metropolitan Asylums Board, said that a return was being prepared but that it was not yet complete. Councillor Anglim, who is reported as saying that he thought vaccination "monstrous and horrible," asked whether all the fatal cases from Marylebone were not vaccinated persons. In the course of his answer the chairman is reported as saying, "One remarkable thing is that children who have recently been vaccinated are practically immune." Why "remarkable"?

THE death, which occurred on Tuesday, Nov. 19th, is announced of Dr. Henry Sutherland, for many years lecturer on insanity at the Westminster Hospital. We hope to give an account of his life in our next issue.

THE annual dinner of the past and present students of the National Dental Hospital and College, Great Portland-street, London, W., will take place in the Royal Venetian Chamber, Holborn Restaurant, on Friday, Nov. 29th, at 7 P.M. The chair will be taken by Mr. S. J. Hutchinson.

THE autumn dinner of the Irish Medical Schools and Graduates' Association will take place in the Victoria Hall of the Hotel Cecil on Wednesday, Nov. 27th, at 7.15 P.M. Early application for tickets is requested to Dr. J. H. Swanton, 49, Harley-street, London, W.

THE Royal Commission on Tuberculosis is now sitting at 1, Chapel-place, Delahay-street, Westminster. The experimental part of its work will be carried out near Stansted in Essex on two farms that have been placed at the disposal of the Commission by Sir James Blyth.

THE WATER-SUPPLY OF LIVERPOOL.

THE annual report on the water-supply of Liverpool for the year 1900 has been recently printed in accordance with a resolution of the Water Committee of that city. It contains a general account of the sources of supply and mode of distribution written by the engineer, Mr. J. Parry, and a report on the quality of the water by Professor R. Boyce of University College, Liverpool. The sources from which the water is derived are Lake Vyrnwy, which has contributed 46·25 per cent.; Rivington Reservoirs, which have supplied 40·52 per cent.; and Windsor, Green-lane, and Dudlow have wells which have together supplied 13·23 per cent. of the total quantity of water used, which amounted during the year to 16,312,075,000 gallons.

The water of Lake Vyrnwy is derived from a mountainous district which has a heavy rainfall. Records are kept of the daily rainfall at 12 places in the watershed. During the year 1900 the quantity registered was over 80 inches at two of these, between 70 and 80 at four, between 60 and 70 at three, and between 56 and 60 at the remaining three. In some part of the watershed rain fell on no less than 208 days of the year. Vyrnwy Lake when full contains 13,125,000,000 gallons; the lowest point to which the surface fell last year was 2·33 feet below the overflow, which represents a quantity of 704,000,000 below the maximum. Extensive plantations of trees have already been made on the watershed, and during last year over 15,000 trees were transplanted from the corporation nurseries. The report contains an excellent diagram showing the levels of the reservoirs and the course of the water from Lake Vyrnwy to the Prescott service reservoirs. The counties traversed are part of Montgomery, Denbigh, Shropshire, Flintshire, Cheshire, and Lancashire. The reservoirs are at Parc Uchaf, the next at Oswestry where there are filter-beds and a clear water-tank. In Cheshire there are reservoirs at Malpas and Colesbrook. The lake is a little over 820 feet, Oswestry reservoir is about 700 feet, Malpas 440 feet, Colesbrook 390 feet, and Prescott reservoirs 276 feet above the sea level. The average results of analysis expressed in parts per 100,000 of the Vyrnwy water were as follows: total solid matters in solution, 5·11; organic carbon, 0·221; organic nitrogen, 0·013; ammonia, 0·002; nitrogen as nitrates, none; total combined nitrogen, 0·015; chlorine, 0·95; oxygen consumed in three hours, 0·158; and hardness, 2½. A number of observations have been made during the year in regard to the bacillus coli in the moorland streams which supply the lake. The bacillus has not usually been found; when present it has generally been discovered in the neighbourhood of a house or other obvious cause of contamination. The sand of the filter-beds has been found to contain a few specimens. None, it may be here stated, have been found in the filtered water.

The Rivington reservoirs, the second great source of the Liverpool water-supply, have a capacity of 4,000,000,000 gallons; when the level was at the lowest point to which it fell during the year 1900 they contained 2,143,000,000 gallons. The gathering ground which supplies the reservoirs is generally situated at an altitude considerably less than that of Vyrnwy and the rain which falls on it is considerably less. Observations on this point were made at 10 stations. In nine of these the rainfall during the year 1900 was found to be between 40 and 50 inches, and at the tenth station it was 38·3 inches. Rain fell on 224 days of the year. Some excellent work has been done to prevent possible contamination of the water. In one case a conduit has been made to convey sewage to a place beyond the watershed, additional purchases of land and buildings have been made by the corporation, and negotiations are in progress in regard to others. Ultimately it may be hoped that it will be possible to ensure that rigid regulations may be made and carried out so that the purity of the upland water will be ensured. Collecting reservoirs are situated at Roddlesworth, at Yarrow, in the course of the Ranebrook, and at Anglezarke From these sources the water is conveyed to the Rivington reservoirs which are situated rather over 400 feet above the sea-level. Water is filtered at Rivington and there is a clear water-tank there. Between Rivington and Prescott there are reservoirs at Aspull and at Mountry House. Some trouble was caused during the year by leakage from the 44-inch pipes between Hindley and Ashton, at places situated at from three to 10 miles from the inlet to the aqueduct on the filter-beds. The damage was caused by disturbances of the ground over coal-mines. This is quite a serious matter, for 116 leakages were caused in this way during the year, and the flow of water to Liverpool was in consequence stopped for an aggregate period of 18 days. In four instances it was found that the pipes were fractured. An even greater number of leakages (to be exact 146) occurred during the preceding year. The average results of analysis of the Rivington water were as follows: total solid matters in solution, 9·62; organic carbon, 0·174; organic nitrogen, 0·023; ammonia, 0·001; nitrogen as nitrates, none; total combined nitrogen, 0·025; chlorine, 1·45; oxygen consumed in 15 minutes, 0·034; in three hours, 0·073; and hardness, 3½.

Concerning the third source of supply—the wells—little need be said; in the case of the one at Windsor a puddle wall has been carried from the engine-house down to the solid rock outside the well-shaft to prevent any possible contamination from surface percolation. No change has taken place in the quantity of water derived from the wells; the total amount for the year was 1,319,505,000 gallons. The well water, especially that of Green-lane and Windsor, is very considerably harder than that obtained from the uplands, as will be seen from the following table giving the average results of analysis in parts per 100,000. The water supplied for consumption in the city of Liverpool is a mixture of the upland and of the well water. The results of the analyses are given in the table which follows below those of the well water.

Source.	Total solid matter in solution.	Organic carbon.	Organic nitrogen.	Ammonia.	Nitrogen as nitrates.	Total combined nitrogen.	Chlorine.	Oxygen consumed in 15 minutes.	Oxygen consumed in three hours.	Hardness.
Dudlow-lane ...	18·05	0·028	0·008	0·001	0·572	0·581	2·90	0·002	0·005	7⅛
Green-lane ...	32·40	0·022	0·003	0·001	0·532	0·536	3·34	0·000	0·004	20½
Windsor	40·20	0·042	0·004	0·002	0·704	0·709	4·60	0·000	0·009	28½
Tap in Dale-street	12·00	0·149	0·018	0·002	0·102	0·121	1·60	0·047	0·099	5½

The Liverpool Corporation Waterworks supply not only the city itself and the country immediately around it but also the town of Chorley and certain other towns and districts which are beyond their compulsory limits. The daily average quantity supplied to the Liverpool area during the year was 25,886,000, to Chorley 469,000, and to the other places 1,332,000 gallons daily.

The average rate per head per day supplied in and immediately around the city was 31·208 gallons, but in this amount is included the trade and ship supplies which together amounted to over eight gallons per head daily. The amount of water distributed during the year 1900 was in excess of that delivered during the previous year to the extent of 261,900,000 gallons. The frosts which occurred in December, 1899, and January and February, 1900, caused the fracture of many pipes and the consequent loss of much water through leakage. The amount of water used during the hot weather of the dry summer was also in excess of that used at ordinary times. Two very interesting diagrams are given in the report, one showing the average daily supply of water per week (i.e., arranged in weekly periods) for the years 1898 and 1900, and the other the actual consumption of water each day during certain selected weeks of the year. The first diagram shows that the greatest amount of water is generally used during the hot months of the year; it shows also the great waste of water which may be caused by the destructive influence of frost. That of February, 1900, caused a sudden increase in the amount of water supplied from under 26 to considerably over 31 millions of gallons daily, although at that very time doubtless many people were inconvenienced by the want of water. The second diagram referred to is of interest in showing the effect of the Saturday half-holiday and the Sunday holiday on the amount of water required. This latter matter, however, is chiefly of local interest. The effects of frost and of

drought on the other hand are of general interest, and it cannot be too strongly insisted upon that, as Mr. Parry observes, "apart altogether from the steady and gradual increase of consumption due to the increase of consumers and to a more liberal use of water for private and public sanitary purposes, there are some years in which the consumption becomes abnormally high through the influence of severe frosts in the winter and long droughts in the summer." It therefore follows that "in any comparison between the quantity per day to be provided and the resources available to meet those demands these abnormal rates of consumption must not be overlooked." Those responsible for the water-supply of London will do well to remember this fact.

The report of Professor Boyce on the bacteriological analysis of the water has already been referred to. A full account is given by him of the methods he employs, of the routine investigations which are made, and of the results obtained. It need here only be said that the investigations are carried out in entire accord with the most recently ascertained scientific facts and that the results are eminently satisfactory.

The people of Liverpool must be congratulated on the success which has rewarded their public-spirited enterprise in trying to obtain an entirely satisfactory water-supply.

MUNICIPAL HONOURS AND MEDICAL MEN.

THE following medical practitioners have been elected or re-elected to the mayoral chairs of their respective boroughs:—

Aberavon.—Mr. John H. Williams, M.R.C.S. Eng., L.S.A., J.P., received his professional education at the London Hospital Medical School and qualified from there in November, 1883. He was associated for many years with Mr. E. Rice Morgan of Morriston and on leaving him in 1895 was the recipient of an illuminated address and a case of surgical instruments from the inhabitants. In July, 1895, he started practice at Aberavon and in the following year was returned at the head of the poll as town councillor. In October, 1897, he was made a justice of the peace for the borough and was again returned to the town council in November, 1899. In November, 1900, he was offered the mayorship but declined the honour. During the present month he has been elected unanimously as mayor, and also as alderman for a term of six years. For three years he has served on the Swansea Port Sanitary Authority and for two years on the Port Talbot Pilotage Board. He is a member of the Morfa Explosion Relief Fund. Mr. Williams is a Freemason and a Conservative in politics.

Barnsley.—By the unanimous wish of the council Mr. J. Fletcher Horne, M.D. St. And., F.R.C.S., F.R.S. Edin., J.P., has this year been re-elected mayor. Born at Barnsley, he was educated at the Leeds Grammar School, and later he entered as a student at the Leeds School of Medicine and qualified in 1874. He afterwards held the post of assistant medical officer at the Leeds General Infirmary. He commenced practice at Barnsley in 1876. He is senior surgeon to the Beckett Hospital and medical referee under the Workmen's Compensation Act for the district. In 1888 he won a seat on the school board, and in 1891 successfully competed for a seat on the town council, which he still holds and which has not been contested since. Dr. Horne has found time to devote to literature. He has written a book on "Trephining in its Ancient and Modern Aspects" (1894), whilst "The Mirage of Two Buried Cities," a book dealing with the artistic and other remains of Herculaneum and Pompeii, was favourably reviewed in THE LANCET of March 17th of last year.

Bath.—Mr. Edward England Phillips, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A., J.P., received his medical education at the Bristol Medical School. After taking his qualifications he was appointed surgeon to the Bristol Dispensary and then practised at Southend-on-Sea where he was medical officer of health of the Rochford Rural and Southend-on-Sea Urban Districts. He was also surgeon to the Southend Victoria Hospital. After being in practice for 25 years he retired from active work and settled in Bath. He has always taken a great interest in political, municipal, and social life in Bath. Mr. Phillips is a justice of the peace for the counties of Essex and Somerset.

Bootle.—Mr. George S. Wild, M.D. Durh., M.R.C.S. Eng., L.R.C.P. Edin., was educated at the Liverpool Royal Infirmary School of Medicine, and gained the bronze medal for anatomy and physiology in 1882, the silver medal in midwifery in 1883, besides certificates in medicine and surgery and the Derby exhibition in clinical medicine and surgery in 1884. He is an honorary physician to Bootle Borough Hospital and is medical referee to several insurance companies. He is a member of the British Medical Association and of the North of England Obstetrical and Gynæcological Society. In 1884 Dr. Wild commenced practice in Bootle, with which borough his family has been connected for many years, his father having been a member of the council since its incorporation, an alderman and chairman of the Health Committee, and also a justice of the peace for the borough. Dr. Wild first entered the Bootle Town Council in 1889, but did not seek re-election at the termination of his year of office. In 1899 he was again returned without opposition, and was a member of the Finance and Health Committees, acting as deputy chairman of the latter.

Bournemouth.—Mr. G. Frost, M.D. Durh., M.R.C.S. Eng., L.R.C.P. Lond., after studying at the Middlesex Hospital, where he obtained first prize in nearly every subject and obtained the Broderip Scholarship, went to Bournemouth 20 years ago and has always taken the greatest interest in matters concerning the health and sanitary condition of the town. While attending to a large practice and to municipal duties he has found time to study for the bar—to which he hopes soon to be called—merely as an educational attainment. He is a Conservative and a member of the Church of England. In sports of all kinds he is much interested. His election as mayor was unanimous.

Cheltenham.—Mr. Richard Rogers, L.D.S. R.C.S.I., has already served the office of mayor for three years, the last occasion being two years ago.

Daventry.—Mr. J. C. O'Rafferty, L.R.C.S., L.R.C.P. Edin., L.F.P.S. Glasg., was born in 1864 and was educated at Belvedere College, Dublin, and at Adelaide Hospital, Dublin. He was in practice at Waltham, Melton Mowbray, from 1893 to 1898, and was medical officer of the Waltham District of the Melton Union. He is now a medical officer of No. 1 District, Daventry Union, and medical officer of the Daventry Union Workhouse. He has acted on the town council for the past two years and was elected mayor on Nov. 1st of the present year.

Droitwich.—Mr. H. Shirley Jones, M.R.C.S., L.S.A., received his medical education at Queen's College, Birmingham, and became qualified in 1884. He has been in practice in Droitwich for 14 years and was elected to the Council in 1891. Eight years later he was elected an alderman and was mayor in the Diamond Jubilee year, 1897.

Falmouth.—Mr. William Banks, M.B. Lond., M.R.C.S. Eng., is the eldest son of Mr. E. Banks of Falmouth, a former chairman of the local School Board. He entered the council in 1892 on the extension of the borough and was elected alderman in 1898.

Glastonbury.—Mr. Maurice J. Doidge, B.A. Cantab., M.D. Brux., M.R.C.S. Eng., L.S.A. Lond., was educated at Merchant Taylors' School, Caius College, Cambridge, and St. Mary's Hospital. In 1887 he succeeded to his father's practice at Lifton, Devon, and went to Glastonbury in 1895. In 1897 he was elected a town councillor and again after a contest in 1898, and also in the present month. Dr. Doidge is a district medical officer, surgeon to the Somerset county police, and certifying factory surgeon.

Honiton.—Mr. James Campbell Macaulay, M.R.C.S. Eng., L.S.A., who has been unanimously elected mayor of Honiton from outside the council, has occupied the civic chair on three previous occasions—namely, in 1884, 1887, and 1894. He was for many years a member of the Honiton Borough Council, but in 1897 he resigned his seat as alderman.

Kingston-upon-Thames.—Mr. William Evelyn St. Lawrence Finny, M.B., M.Ch. R.U.I., L.R.C.P. Edin., of the family of Finny, formerly Ffinny, was born at Gotham, in Derbyshire, and was educated at St. Columba's College, Dublin, and Trinity College School of Physic, where he studied under the immediate supervision of his uncle, Professor J. Magee Finny, M.D., ex-President of the Royal College of Physicians in Ireland. He graduated M.B. and M.Ch. of the Royal University in 1887 and B.A.O. in 1891. He obtained his L.M. Rotunda Hospital and special certificate in gynæcology in 1887, and became L.R.C.P. and L.M. Edinburgh in 1897.

He is a member of the British Medical and Medico-Psychological Associations and a member of the Council of the Irish Medical Schools' and Graduates' Association and of the Surrey Archæological Society. He has contributed to the medical journals and has written articles for the archæological journals. He entered the town council of Kingston-upon-Thames for Kingston Hill ward in November, 1897, and was first elected Mayor of Kingston-upon-Thames in November, 1898. During his former mayoralty he received and entertained H.R.H. the Duke of Cambridge and conferred the freedom of the borough upon him, His Royal Highness having given the land upon which the Victoria Hospital was built and afterwards formally opened it. Dr. Finny was the organiser of the celebration of the 700th anniversary of the granting of the first Charter to Kingston by King John and he designed a stained glass heraldic window which was placed in the town hall by public subscription to commemorate the event. Dr. Finny has served on the Kingston Board of Guardians for four years and was re-elected at the head of the poll in 1897.

Montgomery.—Mr. N. W. Fairles-Humphreys, M.R.C.S. Eng., L.S.A., was born in 1837 and was educated at St. Bartholomew's Hospital. In 1885 he was elected alderman for the Borough of Montgomery and has been six times mayor of that borough. He is a justice of the peace for the county of Montgomeryshire, was high sheriff in 1882–83, and has been a county alderman since 1889.

Nelson.—Dr. W. Jackson, L.R.C.P. Edin., L.M., L.F.P.S. Glasg., studied medicine at the University and Royal Infirmary of Glasgow. He commenced practice in Nelson in 1882 and obtained the M.D., Ch.D. Brux. in 1888, and the D.P.H. Cambridge in 1889; whilst reading the Public Health and other Acts for the latter degree he became fascinated with the study of law and joined the Middle Temple. He was called to the Bar in 1894. He is certifying factory surgeon for the borough of Nelson and district, and has been for 12 years one of the honorary medical officers to the Victoria Hospital for Burnley and District. He commenced his municipal career by joining the Nelson Town Council on its incorporation in 1890 and has been chairman of the Health Committee for a period of 10 years, during which time he has been active in promoting many improvements of a sanitary nature. Dr. Jackson holds the position of being mayor of a town which can boast of having the lowest death-rate (12·2) and the lowest percentage of infantile deaths (127 per 1000 births under one year) of any borough in Lancashire.

Ruthin.—Mr. J. Medwyn Hughes, M.B., C.M. Edin., has been appointed mayor of Ruthin for the sixth time. He is an alderman and has been on the council for 13 years. He graduated M.B., C.M. Edin. in 1886, and has been in practice for 15 years. He was medical officer of health of Ruthin District for seven years, and he now fills the offices of union medical officer and public vaccinator. He has always taken an active interest in educational matters, both local and county.

Saffron Walden.—Mr. J. P. Atkinson, M.D. Glasg., L.R.C.P. Lond., L.R.C.S. Edin., was born in 1838. After being educated privately he studied medicine at the University of Glasgow, where he graduated M.D. in 1863 with honours, having taken honours also at the first M.D. examination. Previously to that he took the L.R.C.S. Edin., and later in the same year the L.R.C.P. Lond. After practising for some years in Oxfordshire he settled at Saffron Walden. Dr. Atkinson has always taken a keen interest in public and municipal affairs and was elected a member of the Town Council in 1888. In 1891 he was elected mayor and was re-elected the following year. He was again appointed mayor in November of the present year. He takes great interest in all sanitary matters, and at his instigation the council resolved to adopt the bacterial system in the treatment of sewage. He is chairman of the Isolation Hospital Board and also of several local institutions. He is a strong and enthusiastic supporter of the Volunteer force and is surgeon-major 3rd (Cambs) volunteer battalion Suffolk regiment. He is a Churchman and a Conservative.

Saltash.—Mr. Robert Thornton Meadows, M.D. Edin., D.P.H., was born in Canada. He is a Surgeon-Captain of the 2nd Volunteer Battalion Duke of Cornwall's Light Infantry, and belongs to the army medical reserve of officers. He also holds the position of medical officer to St. Barnabas Cottage Hospital. He was elected to the Saltash Council in 1896 and was appointed mayor in 1897, again in 1898, and also in the present year.

Looking Back.

FROM

THE LANCET, *SUNDAY, NOV.* 23, 1823.

MEDICAL SOCIETIES.

ALTHOUGH we do not presume that our readers are unacquainted with the various Medical Societies which exist in this Metropolis, we apprehend there are many to whom an occasional sketch of the most prominent speakers at these useful institutions will be at once entertaining and instructive. It may not be improper to preface the occasional articles, which it is our intention to submit to the public upon this subject, by a few remarks upon the advantages which result from Medical Societies.—Some are composed almost entirely of the seniors of the profession. In such, the conflicting opinions of the veteran practitioners are discussed with a calmness suitable to their age and station, and the doubts and uncertainties of a profession, the perplexities of which are not to be cleared away by mathematical demonstrations or closest cogitations, are submitted for consideration with mutual advantage, and with important benefits to the public. Several of these Societies, however, are formed principally by junior practitioners and medical students; and in these we can neither expect, nor shall we find, the philosophic calmness of age, nor the extensive practical experience which years alone can bestow.

It is also true that, in these Societies, occasional envy may arise; difference of opinion may be discussed with unnecessary warmth: but these trifling disadvantages are amply redeemed by many evident benefits. The habit of addressing a society is productive of a very important advantage. It imparts a facility and promptitude of expression which is most essentially necessary to the success of a medical practitioner; and for want of which we have not unfrequently seen *real* knowledge buried under the *appearance* of total ignorance. The public will judge of the professional acquirements of a man, of which they know little or nothing, by his *extra* professional abilities, of which they at least flatter themselves they know something; and there is no acquisition more imposing, none more valuable to the possessor, than that of promptly and perspicuously stating an opinion, or describing the nature of the case intrusted to his care, when unexpectedly called upon. Nature may have conferred this power upon some intuitively; by many, however, it is acquired with difficulty. It would require but little ingenuity to dilate upon this subject. The operations of *The Lancet*, however, must be brief. We shall first alight upon the Westminster Medical Society, and shall comment upon the different speakers who most frequently occupy its attention. As we are members of the other Metropolitan Societies, we shall pay them due attention, after having devoted a few articles to the Westminster. The order in which we shall notice them will be guided entirely by our own convenience, and is not to be considered as any proof of our opinion of their respective importance.

THE GENERAL MEDICAL COUNCIL: ELECTION OF DIRECT REPRESENTATIVES, 1901.

DR. BRUCE'S ADDRESS TO THE REGISTERED MEDICAL PRACTITIONERS OF SCOTLAND.

LADIES AND GENTLEMEN,—Allow me to thank you most gratefully for your steady support which has during the last 15 years enabled me, however unworthy, to act as your representative on the General Medical Council. May I respectfully ask for your votes for the next quinquennium?

As long as it is customary for the majority of the representatives of the various licensing bodies, as well as those appointed by the Crown, to retain their seats for practically an indefinite term of years, I venture to say that comparative security of tenure for the Direct Representatives will add to their dignity and influence in the deliberations of the Council. I may be allowed to add that the provinces are surely entitled to have *one* Representative, as against six

from Edinburgh and Glasgow, there being already three from each of these cities with seats on the Council.

As far as Scotland is concerned, there has been only a single question raised of serious importance to the profession. The right of medical practitioners to dispense drugs seemed, from the action of the Medical Council, to be in danger; and the Council's decision in a particular case caused much feeling in and about Glasgow. But there never was any intention on the part of the Council to interfere with any of the lawful privileges of medical men. Since the error in the form of indictment was pointed out the Council has taken care to avoid a similar mistake. As regards prosecutions at the instance of the Pharmaceutical Society, the Council, while feeling bound to intervene in the interests of the public at large, and for the sake of the good name of the profession, is not, I am sure, in the least degree disposed to become the cat's-paw of the chemists and druggists for their advantage, and to the detriment of members of our own body. At the same time I am very sorry that the Council, guided by legal advice, refused to hear the representative deputation which went up to London in June last to voice the views of their fellow practitioners in Glasgow. I felt at the time that I could only enter my protest against such action. If the Council is to be congratulated on the strictly legal lines on which it has hitherto conducted its penal business it should also bear in mind that it is merely a domestic tribunal. While steadily guarding itself when proceeding to inflict sentences entailing loss of civil rights to accused persons, the Council, in my opinion, ought at the same time to take cognisance of the purely professional aspects of the questions submitted to it, and be ready to listen to every form of deliberate and respectful professional opinion.

With considerable reluctance I have come to the conclusion that there is a great need for regulating the duties and improving the education and training of midwives, while retaining their services as necessary in connexion with puerperal attendance on the poorer classes.

The subject of medical aid associations has absorbed much time and attention from the Council. Contract practice in this form was complained of as unprofessional and it was thought incumbent on the Council to take the matter up. Much evidence was led before a special committee, of which I was a member, in support of the averments against those bodies and their management. On the other hand, strenuous attempts were made on the opposite side to rebut these charges. The committee came to the conclusion that much harm had resulted in many cases, both to the patients and their medical attendants, from such a system of "sweating." They were, however, at the same time forced to the conclusion that the Council could only deal with the mischief complained of by issuing a general warning to all concerned, more especially against touting and advertising in connexion with these institutions. At a later stage several meetings took place between the committee and representatives of the great friendly societies, and it was unanimously resolved to form a conciliation board which would deal with all questions in dispute between clubs and their doctors. The societies possess in their records sufficient data, both as to number of cases and periods of sickness, to be able to provide almost mathematically the amount of money necessary to set aside for paying fair fees for medical attendance on their members, if such should be required. The charge would best be framed in the usual way, as so much per visit, or advice at the doctor's rooms. But if it be found to be simpler in working, to fix a lump sum per case of illness, much even then would be done towards placing contract practice on a sounder basis. While I hold strongly that such arrangements are fundamentally wrong, knowledge, skill, and attention being in their nature imponderable and not proper subjects for being bought and sold, yet it would be foolish for club doctors not to accept half a loaf rather than no bread. Club practice in England, at least, has acquired too much of a hold to be swept away by outside interference. I hope that, by means of the conciliation board referred to, better terms will be secured by our brother practitioners.

There is clamant need for amendment of the Medical Acts, more particularly by adding to the number of Direct Representatives. Scotland should have at least two such, one for the eastern and another for the western division of this part of the kingdom.

With regard to medical education, I am decidedly of opinion that the present curriculum of five years should remain intact, in reality if not in name. By relegating the subjects of physics, chemistry, and biology (including botany) to a course of scientific study and examination in extension of the present medical preliminary examination a complete term of four years for purely medical and surgical work would thus be ensured. The last of the four years should be devoted entirely to bedside study and practice, either in hospitals or in connexion with public dispensaries. On the other hand, the number of systematic lectures ought to be distinctly diminished, whilst the worrying tests by formal examinations might, in the real interests of the student's education, be considerably curtailed.

I am, Gentlemen, your faithful and obedient servant,

WILLIAM BRUCE, M.D., L.R.C.S. Edin.,
LL.D. (Hon. Aberd. Univ.)

Dingwall, Nov. 8th, 1901.

DR. GLOVER'S RESIGNATION.

At a meeting of the Liverpool Medical Club held on Nov. 6th to discuss the merits of the candidates for election to the General Medical Council the honorary secretary read a letter from Dr. Glover announcing his withdrawal from the contest owing to illness. A motion was proposed and carried unanimously that the honorary secretary should be requested to write to Dr. Glover expressing the regret of the meeting at the cause of his retirement and an appreciation of his long services on the Council on behalf of the profession.

THE MEDICAL GUILD OF MANCHESTER AND DR. WOODCOCK'S CANDIDATURE.

At a meeting of the Medical Guild of Manchester on Nov. 13th it was decided to urge members to plump for Dr. S. Woodcock at the forthcoming election of Direct Representatives on the General Medical Council. He is pledged to support the "registration of midwifery nurses and the provision by the Government for the payment of the fees for the nurse and medical attendant selected by the patient, as outlined in the guild scheme."

THE CANDIDATURE OF MR. GEORGE BROWN AND MR. GEORGE JACKSON.

There will be a meeting in Halifax on Tuesday, Nov. 26th, at 4.30 P.M., in support of the candidature of Mr. George Brown and Mr. George Jackson.

THE REPORT OF THE INSPECTORS OF LUNATICS FOR IRELAND.

IN the fiftieth report of the Inspectors of Lunatics for Ireland it is stated that the total number of the insane in establishments on Jan. 1st, 1901, was 21,169, as against 20,863 on the corresponding date of the previous year. These numbers do not take into account insane patients residing in private dwellings—save Chancery patients—or those wandering at large. Although a total increase of lunatics has thus to be recorded it is satisfactory to note that it only amounted to 306 over the total for the previous year and that it is 186 less than the average annual increment for the past 10 years, which was 492. As pointed out in previous reports, a considerable number of admissions to district asylums consists of transfers from the lunatic wards of workhouses. "It is, however, probable that the classes of pauper lunatics which furnish a large proportion of the first admissions to asylums and workhouses are decreasing from year to year. No absolute figures can, however, be obtained until the result of this year's census is known." The total number of lunatics under care increases in Ireland at a rapid rate in proportion to the population. Thus in 1895 there were 401 patients per 100,000 population, in 1897 the proportion was 430, in 1899 it was 460, and in 1900 it was 470 per 100,000. The total admissions of patients during the year amounted to 3546, as against 3549 during the previous year. The number of patients discharged as recovered during the year was 1288, or 8·0 per cent. of the average number resident. The deaths during the year amounted to 1274, or 7·9 per cent., as calculated on the same basis. A high rate of mortality from phthisis has prevailed during the year, the number of deaths from this cause being 349, as against 321 during the previous year. The extreme liability of the insane to contract tuberculosis is

well known, but the question of building isolation hospitals for them "presents special difficulties such as would not arise in ordinary hospitals." The returns of the number of cases of general paralysis are also of interest, showing a "rapid increase of the disease amongst the urban population of Ireland where it was comparatively unknown not many years ago." The average cost of maintenance per head has gone up during the year to £2 3*s.* 10*d.* above that of the previous year, this increase being due to the great advance in the price of almost all articles of food, fuel, hardware, &c., which took place during the year. The year 1900 was uneventful so far as the State Criminal Lunatic Asylum was concerned. The number of patients on Jan. 1st, 1901, was 162, which was identical with the figure a year earlier. No suicide, escape, or serious casualty occurred during the year among these patients. Zymotic diseases have prevailed to an exceptional extent in certain asylums, as, e.g., at Ballinasloe, Clonmel, Cork, Downpatrick, Limerick, Monaghan, and Mullingar, the outbreaks being mainly those of influenza, dysentery, typhoid fever, and erysipelas. No cases of zymotic disease occurred in Antrim, Armagh, or Castlebar asylums. Referring to the growing need of new asylums for the accommodation of the increasing numbers of lunatics the Inspectors are of opinion that where structural alterations of existing workhouses may involve excessive outlay "it would in the end be found more economical to erect in connexion with the existing district asylums simple and inexpensive buildings for the accommodation of the insane now located in workhouses."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 33 of the largest English towns 6275 births and 4264 deaths were registered during the week ending Nov. 16th. The annual rate of mortality in these towns, which had been 16·7, 17·6, and 19·7 per 1000 in the three preceding weeks, declined again to 19·4 per 1000 last week. In London the death-rate was equal to 20·0 per 1000, while it averaged 19·0 per 1000 in the 32 large provincial towns. The lowest death-rates in these towns were 11·2 in Croydon, 12·3 in Leicester, 12·4 in Halifax, and 13·2 in Swansea; the highest rates were 22·8 in Salford, 23·9 in Manchester, 27·2 in Preston, and 28·4 in Norwich. The 4264 deaths in these towns last week included 427 which were referred to the principal zymotic diseases, against 371 and 442 in the two preceding weeks; of these 427 deaths 138 resulted from measles, 81 from diphtheria, 57 from diarrhœal diseases, 53 from "fever" (principally enteric), 46 from whooping-cough, 38 from scarlet fever, and 14 from small-pox. No death from any of these diseases occurred last week in Derby or in Burnley; in the other towns they caused the lowest death-rates in Croydon, Nottingham, and Newcastle, and the highest rates in Wolverhampton, Norwich, Salford, Leeds, and Sheffield. The greatest mortality from measles was recorded in Norwich, Manchester, Oldham, Preston, and Sheffield; from scarlet fever in Birmingham; and from diarrhœal diseases in Wolverhampton. The mortality from whooping-cough and from "fever" showed no marked excess in any of the large towns. The 81 deaths from diphtheria in these towns included 35 in London, six in West Ham, six in Cardiff, five in Portsmouth, and four in Liverpool. Fourteen fatal cases of small-pox were registered in London, but not one in any of the 32 large provincial towns. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals at the end of the week was 368, against 180, 284, and 297 on the three preceding Saturdays; 113 new cases were admitted during the week, against 57, 169, and 62 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3392 and 3331 at the end of the two preceding weeks, had risen again to 3353 on Saturday, Nov. 16th; 376 new cases were admitted during the week, against 400, 425, and 380 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 242, 327, and 445 in the three preceding weeks, further rose last week to 477, and were 83 above the corrected average. The causes of 43, or 1·0 per cent., of the deaths in the 33 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Bradford, and 17 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Manchester, Sunderland, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had risen from 14·5 to 21·7 per 1000 in the six preceding weeks, declined again to 19·9 per 1000 during the week ending Nov. 16th, but showed an excess of 0·5 per 1000 above the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 12·6 in Perth and 16·0 in Edinburgh to 21·6 in Glasgow and 25.9 in Greenock. The 633 deaths in these towns included 22 which were referred to diarrhœa, 18 to measles, 12 to "fever," nine to diphtheria, eight to scarlet fever, and three to whooping-cough. In all, 72 deaths resulted from these principal zymotic diseases last week, against 69, 79, and 90 in the three preceding weeks. These 72 deaths were equal to an annual rate of 2·3 per 1000, which was 0·4 per 1000 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of diarrhœa, which had been 32 and 23 in the two preceding weeks, further declined last week to 22, of which 13 occurred in Glasgow, four in Dundee, and three in Aberdeen. The deaths from measles, which had been 12, 14, and 24 in the three preceding weeks, decreased to 18 last week, and were all registered in Glasgow. The deaths referred to different forms of "fever," which had increased from five to 16 in the four preceding weeks, declined again to 12 last week, and included eight in Glasgow and two in Paisley. The fatal cases of diphtheria, which had been nine and six in the two preceding weeks, rose again last week to nine, of which five occurred in Glasgow and three in Edinburgh. The deaths from scarlet fever, which had been five in each of the two preceding weeks, increased to eight last week, and included five in Glasgow and two in Greenock. The fatal cases of whooping-cough, which had been eight, five, and 16 in the three preceding weeks, declined again last week to three, all of which were registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had risen from 75 to 162 in the five preceding weeks, further increased last week to 190, and exceeded by 27 the number recorded in the corresponding period of last year. The causes of 26, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19·3, 22·7, and 23·2 per 1000 in the three preceding weeks, further rose to 23·9 per 1000 during the week ending Nov. 16th. During the past four weeks the death-rate has averaged 22·3 per 1000, the rates during the same period being 18·2 in London and 17.0 in Edinburgh. The 172 deaths of persons belonging to Dublin registered during the week under notice were five in excess of the number in the preceding week, and included six which were referred to the principal zymotic diseases, against nine, 19, and five in the three preceding weeks; of these, three resulted from diphtheria, two from diarrhœa, and one from whooping-cough. These six deaths were equal to an annual rate of 0·8 per 1000, the zymotic death-rates during the same period being 1·8 in London and 1·0 in Edinburgh. The mortality from whooping-cough exceeded that recorded in any recent week; the fatal cases of diarrhœa, which had been four, nine, and two in the three preceding weeks, were again two last week. The 172 deaths in Dublin last week included 37 of children under one year of age and 45 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed a slight excess over the respective numbers recorded in the preceding week. Nine inquest cases and six deaths from violence were registered, and 50, or nearly one-third of the deaths occurred in public institutions. The causes of eight, or nearly 5 per cent., of the deaths in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING OCTOBER, 1901.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the cities and boroughs in the county of London. With regard to the notified cases of infectious diseases it

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING OCTOBER, 1901.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1901.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœal diseases.	Total.	Annual rate per 1000 persons living.			
LONDON	4,543,737	347	2878	1737	1	444	10	21	586	—	6024	13·8	29	95	70	179	80	—	64	—	232	739	1·7	6703	15·4	138
West Districts.																										
Paddington	144,154	1	75	89	—	11	—	1	21	—	198	14·3	—	—	3	12	—	—	1	—	4	20	1·4	152	11·0	106
Kensington	176,787	2	63	28	—	13	3	2	22	—	133	7·8	—	10	—	3	2	—	2	—	6	23	1·4	244	14·4	125
Hammersmith	112,619	—	46	23	—	10	—	—	18	—	97	9·0	—	2	2	4	3	—	—	—	7	18	1·7	158	14·6	138
Fulham	138,426	—	58	135	—	18	—	—	8	—	219	16·5	—	1	1	10	3	—	1	—	9	25	1·9	171	12·9	93
Chelsea	73,879	2	19	11	—	3	—	—	8	—	43	6·1	—	—	—	—	1	—	—	—	2	3	0·4	102	14·4	91
City of Westminster	182,502	37	82	36	—	13	1	—	15	—	184	10·5	2	5	—	2	—	—	1	—	4	14	0·8	248	14·2	92
North Districts.																										
St. Marylebone	133,060	13	59	21	—	15	—	—	17	—	125	9·8	1	—	3	4	—	—	—	—	4	12	0·9	167	13·1	86
Hampstead	82,287	1	32	14	—	9	—	—	6	—	62	7·9	—	—	3	3	—	—	1	—	—	7	0·9	86	10·9	64
St. Pancras	235,297	37	160	139	—	20	—	2	25	—	393	17·4	6	4	2	21	4	—	3	—	12	52	2·3	395	17·1	135
Islington	335,325	19	242	129	—	42	—	1	29	—	462	14·4	—	19	4	18	2	—	6	—	25	74	2·3	482	15·0	124
Stoke Newington	51,328	1	29	34	—	3	—	—	7	—	74	15·0	—	—	—	4	—	—	—	—	1	5	1·0	58	11·8	135
Hackney	219,780	8	173	156	—	20	—	—	41	—	408	19·4	2	—	5	12	—	—	4	—	13	36	1·7	305	14·5	124
Central Districts.																										
Holborn	59,205	47	29	28	—	4	—	—	6	—	114	20·1	3	3	—	2	3	—	—	—	4	15	2·6	102	18·0	127
Finsbury	101,253	21	67	49	—	14	—	1	20	—	172	17·7	1	5	3	3	1	—	2	—	9	24	2·5	200	20·6	134
City of London	26,627	1	17	7	—	3	—	—	—	—	28	11·0	—	—	1	1	—	—	—	—	—	2	0·8	44	17·2	179
East Districts.																										
Shoreditch	118,564	3	34	20	—	7	4	—	22	—	100	8·8	—	2	2	2	1	—	1	—	12	20	1·8	213	18·7	191
Bethnal Green	129,700	6	83	48	—	13	—	1	35	—	186	15·0	—	7	1	4	2	—	6	—	5	25	2·0	224	18·0	148
Stepney	298,864	27	175	103	—	33	—	1	55	—	394	13·7	4	4	6	14	11	—	5	—	20	64	2·2	630	22·0	186
Poplar	168,887	17	85	58	—	26	—	1	25	—	212	13·1	2	5	2	8	3	—	5	—	13	38	2·3	284	17·5	136
South Districts.																										
Southwark	206,219	9	233	74	—	13	—	1	34	—	364	18·4	1	4	12	6	1	—	2	—	15	41	2·1	377	19·1	144
Bermondsey	130,348	58	145	32	—	31	—	2	20	—	288	23·0	5	2	5	—	—	—	—	—	6	18	1·4	226	18·1	142
Lambeth	302,460	14	173	67	—	21	—	1	33	—	309	10·7	—	9	5	5	6	—	5	—	26	56	1·9	473	16·3	141
Battersea	169,364	5	128	46	—	16	—	—	15	—	210	12·9	—	11	—	3	1	—	3	—	12	20	1·8	228	14·7	133
Wandsworth	233,943	1	102	99	—	11	—	2	27	—	242	10·8	—	2	3	10	—	—	5	—	8	28	1·2	268	11·9	98
Camberwell	259,897	6	263	130	—	17	—	3	31	—	450	18·1	1	—	3	19	3	—	3	—	12	41	1·6	348	14·0	114
Deptford	110,732	1	100	58	—	8	—	—	15	—	182	17·1	—	—	2	5	1	—	—	—	9	17	1·6	141	13·3	126
Greenwich	96,188	2	74	17	—	7	—	—	10	—	110	11·9	—	—	—	2	1	—	1	—	4	8	0·8	100	10·8	78
Lewisham	128,423	5	70	53	1	13	—	1	12	—	155	12·6	—	—	1	1	1	—	5	—	4	12	1·0	129	10·5	62
Woolwich	117,619	2	62	23	—	7	—	1	9	—	104	9·2	1	—	1	1	—	—	2	—	6	11	1·0	148	13·1	100
Port of London	—	1	—	—	—	3	2	—	—	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 13·8 per 1000 of the population, provisionally estimated at 4,543,757 persons in the middle of the year. In the three preceding months the rates had been 9·6, 8·6, and 12·4 per 1000 respectively. The rates were considerably below the average in Kensington, Hammersmith, Chelsea, Hampstead, Shoreditch, and Woolwich; while they showed the largest excess in St. Pancras, Hackney, Holborn, Finsbury, Southwark, Bermondsey, and Camberwell. During the five weeks ending Nov. 2nd 347 cases of small-pox were notified in London, against 22, 94, and 157 in the three preceding months; 58 cases belonged to Bermondsey, 47 to Holborn, 37 to the City of Westminster, 37 to St. Pancras, 27 to Stepney, and 21 to Finsbury. Of these 347 cases the number during the last week of the month amounted to 173, and included 39 in Bermondsey, 38 in Holborn, and 29 in the City of Westminster. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 13, 74, and 163 at the end of the three preceding months, had further risen to 284 on Saturday, Nov. 2nd; the weekly admissions averaged 72, against 23 and 44 in the two preceding months. The prevalence of scarlet fever showed a considerable increase over that recorded in the preceding months; among the various metropolitan boroughs this disease was proportionally most prevalent in Hackney, Southwark, Bermondsey, Battersea, Camberwell, Deptford, and Greenwich. The Metropolitan Asylums hospitals contained 3281 scarlet fever patients at the end of October, against 3026, 2971, and 2752 at the end of the three preceding months; the weekly admissions averaged 399 during last month, against 343, 288, and 412 in the three preceding months. The prevalence of diphtheria showed a slight excess over that recorded in the preceding month; the greatest proportional prevalence of this disease occurred in Paddington, Fulham, St. Pancras, Stoke Newington, and Hackney boroughs. There were 1570 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 1332, 1336, and 1499 at the end of the three preceding months; the weekly admissions averaged 243, against 209, 177, and 248 in the three preceding months. The prevalence of enteric fever showed a considerable diminution from the exceptionally high rate of the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in Fulham, St. Pancras, Islington, Hackney, Finsbury, Poplar, and Bermondsey. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 166, 225, and 292 at the end of the three preceding months, had declined to 291 at the end of October; the weekly admissions averaged 38, against 29, 42, and 50 in the three preceding months. Erysipelas was proportionally most prevalent in Hackney, Finsbury, Shoreditch, Bethnal Green, Stepney, and Southwark. The 21 cases of puerperal fever included three in Camberwell, two in Kensington, two in St. Pancras, two in Bermondsey, and two in Wandsworth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in the public institutions of London having been distributed among the boroughs in which the deceased persons had previously resided. During the five weeks ending Nov. 2nd the deaths of 6703 persons were registered, equal to an annual rate of 15·4 per 1000, against 16·1, 18·5, and 15·4 per 1000 in the three preceding months. The lowest death-rates in the various metropolitan boroughs were 10·5 in Lewisham, 10·8 in Greenwich, 10·9 in Hampstead, 11·0 in Paddington, 11·8 in Stoke Newington, and 11·9 in Wandsworth; the highest rates were 18·0 in Holborn and in Bethnal Green, 18·1 in Bermondsey, 18·7 in Shoreditch, 19·1 in Southwark, 20·6 in Finsbury, and 22·0 in Stepney. During the five weeks of October 739 deaths were referred to the principal zymotic diseases; of these 29 resulted from small-pox, 95 from measles, 70 from scarlet fever, 179 from diphtheria, 50 from whooping-cough, 64 from enteric fever, and 252 from diarrhœal diseases. The lowest death-rates from these diseases occurred last month in Chelsea, City of Westminster, St. Marylebone, Hampstead, City of London, and Greenwich; and the highest rates in St. Pancras, Islington, Holborn, Finsbury, and Poplar. The 29 fatal cases of small-pox greatly exceeded the average, and included six in St. Pancras, five in Bermondsey, four in Stepney, and three in Holborn. The 95 deaths from measles were 21 below the average number in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Kensington, Islington, Finsbury, Bethnal Green, and Battersea. The 70 fatal cases of scarlet fever were 29 below the corrected average number; the greatest proportional fatality from this disease occurred in Hampstead, Hackney, St. Marylebone, Finsbury, Southwark, and Bermondsey. The 179 deaths from diphtheria showed a decline of 90 from the average number in the corresponding periods of the 10 preceding years; this disease was proportionally most fatal in Paddington, Fulham, St. Pancras, Islington, Stoke Newington, Hackney, and Camberwell. The 50 fatal cases of whooping-cough were 42 below the corrected average number; the greatest proportional mortality from this disease was recorded in Hammersmith, Fulham, Holborn, Stepney, and Lambeth. The 64 deaths referred to enteric fever showed a considerable decline from the average number; among the various metropolitan boroughs this disease was proportionally most fatal in Islington, Hackney, Finsbury, Bethnal Green, Poplar, Wandsworth, and Lewisham. The 252 deaths from diarrhœal diseases were slightly in excess of the corrected average number; the proportional mortality from these diseases was highest in Finsbury, Shoreditch, Poplar, Southwark, Lambeth, and Deptford. In conclusion, it may be stated that the aggregate mortality in London from these diseases during October was more than 16 per cent. below the average.

Infant mortality in London last month, measured by the proportion of deaths among children under one year of age to registered births, was equal to 128 per 1000. The lowest rates of infant mortality were recorded in Chelsea, City of Westminster, St. Marylebone, Hampstead, Greenwich, and Lewisham; and the highest rates in City of London, Shoreditch, Bethnal Green, Stepney, Southwark, and Bermondsey.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon Edward Ferguson has been placed on the retired list of his rank. Dated Nov. 11th, 1901.

The following appointments are notified:—Surgeon J. E. H. Phillips to the Royal Naval Hospital at Chatham.

Civil Practitioners: J. F. Mannix to be Surgeon and Agent at Cahirciveen and Kells and S. Davidson to be Surgeon and Agent at Helmsdale.

ROYAL ARMY MEDICAL CORPS.

Captain R. E. Phillips has been selected for service with the South African Constabulary. The following time-expired officers in India will shortly return to England with invalids:—Lieutenant-Colonel P. J. Dempsey, Bengal; Major F. S. Le Quesne, V.C., Punjab; Captain H. S. Thurston, Bengal; Major J. C. Haslett, Bengal; Major C. S. Sparkes, Bombay; Captain T. W. Gibbard, Madras; Lieutenant-Colonel R. Blood, Bombay; Major R. J. A. Durant, Madras; and Captain C. E. Pollock, Bengal.

Lieutenant-Colonel T. R. A. Tuckey has been appointed Senior Medical Officer in charge of the Connaught Hospital and to command No. 2 Company at Aldershot, in succession to Lieutenant-Colonel Wilson, retired.

Lieutenant Brunskill has arrived at Sierra Leone and has been posted for duty.

Colonel J. L. Notter, late professor at the Royal Victoria Hospital, Netley, has been appointed Principal Medical Officer at Aldershot, in succession to Surgeon-General O'Dwyer.

VOLUNTEER CORPS.

Rifle: 3rd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment): The undermentioned officer resigns his commission: Surgeon-Captain E. O. Croft.

VOLUNTEER MEDICAL STAFF CORPS.

The Glasgow Companies:—James Bruce to be Surgeon-Lieutenant.

VOLUNTEER OFFICERS' DECORATION.

The King has conferred the Volunteer Officers' Decoration upon the undermentioned officers of the Volunteer Force:—*Eastern District: Rifle:* 2nd (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment: Surgeon-Captain

Richard Legg Batterbury. 3rd Volunteer Battalion the Bedfordshire Regiment: Surgeon-Lieutenant-Colonel David Thomson. *North-Eastern District: Artillery:* 1st Lincolnshire (Western Division, Royal Garrison Artillery): Surgeon-Lieutenant-Colonel Thomas Newby, retired. *Rifle:* 2nd Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Surgeon-Lieutenant-Colonel Alfred Chawner. *North-Western District: Artillery:* 1st Cheshire and Carnarvonshire Volunteer Artillery: Surgeont-Lieutenant-Colonel Edward James Lloyd. 7th Lancashire (the Manchester Artillery) Volunteer Artillery: Surgeon-Lieutenant-Colonel Richard Augustus Shelton Daly. *Scottish District: Artillery:* 1st Fifeshire Volunteer Artillery: Honorary Assistant Surgeon James Welsh.

MENTIONED IN DESPATCHES.

The following are mentioned in Lord Kitchener's despatches, publishe i in the *London Gazette* on Nov. 15th: Captain F. W. Begbie, R.A.M.C., who, at Maatjesspruit on July 7th, 1901, behaved very gallantly in riding into Boer lines under continuous fire to attend to the wounded; Lieutenant W. H. Odlum, R.A.M.C., for tending wounded under heavy fire at Draaihoek, Orange River Colony, on July 8th, 1901; Civil Surgeon J. Prentice, for going under very heavy fire to attend to a wounded man lying in the open, and for continuous good work; Major H. N. Thompson, R.A.M.C., who, near Jamestown, Cape Colony, on June 4th, 1901, went a considerable distance under fire towards the enemy's position to attend to Lieutenant Hogg has been conspicuous for good service throughout.

Corporal W. W. Weeden, R.A.M.C., who, at Bersefontein, Orange River Colony, on July 24th, 1901, rode some distance under fire to assist a wounded man lying in the open and stayed with him 20 minutes, being fired at all the time, has been promoted sergeant by the Commander-in-Chief.

SOUTH AFRICAN WAR NOTES.

Civil Surgeons Mackay, Stanley, Pomeroy, Sandalands, Howe, Davey, Worth, Lees, and Robertson are on passage home.

Lieutenant-Colonel C. W. Thiele, R.A.M.C., and Captain B. Forde, R.A.M.C., have been discharged from hospital to duty.

AFFAIRS IN SOUTH AFRICA.

There does not appear to be any unusual amount of disease among the troops serving in South Africa, but the list of those reported as dangerously ill—from enteric fever mostly—is still a long one. Although fresh outbreaks on any large scale are not recorded, this fever is widespread, for cases are reported from different places very far apart. It is to be feared that with the arrival at the Cape of susceptible material in the shape of reinforcements fresh from this country and the approach of hot weather there will be no decrease of its prevalence. The reports from the refugee camps are such as might have been anticipated. They show that the excessive mortality and sickness were not due to any want of care and effort on the part of the English authorities, but were largely attributable to unavoidable causes and to ignorance and neglect on the part of the Boers, whose customs and practices violate the most rudimentary laws of hygiene and occasionally even of decency. As regards the progress of the war the process of "wearing down" the enemy's opposition is slowly but surely going on and Lord Kitchener's reports are, on the whole, increasingly favourable. There is this to be said, that if terms could have been settled between the Boers and Lord Roberts it seems almost certain that war would have broken out again.

UNREGISTERED MEDICAL MEN AT THE CAPE.

A correspondent draws our attention to the following cutting from the *Cape Times* referring to a case in which a Dr. Sterne sued the Queen's Town Corporation for services rendered. The case was decided against him on the ground that he was not registered in Cape Colony as a medical practitioner, and it came out in evidence that he had only gone through a three years' course:—

SIR,—In your report of this week's issue of the legal case "Sterne v. Queen's Town Town Council," Mr. Van der Reit is said to have made the entirely erroneous statement that no American diplomas are recognised in this colony. No American diplomas are registered unless they indicate a period of five years' study, a most necessary provision, as every medical man knows. As a matter of fact, there are quite a number of registered American medical men at the Cape, hailing from universities which come up to the requirements I have just indicated. Another point in the case is that the military authorities were acting illegally in engaging Dr. Sterne, even for their own work. The army regulations forbid the employment of any man not legally registered by the Medical Council of the United Kingdom, and, curiously enough, the requirement has been strictly enforced as regards Canadian graduates, although I personally know of another American graduate, and one only possessing the Staats Examen certificate of Germany who have been appointed to the military service.

Re the action of the Queen's Town Municipal Council, I cannot but think that that body must have had motive, not disclosed in the action, for contesting the claim. Otherwise its conduct is curious. It should be remembered, however, that the council ran some legal risk. If any person dealt with, on certificate from Dr. Sterne, liked to fight the council an action would certainly lie, as such certificate would be invalid, and the council would be responsible.—I am, &c.,

Cape Town, Sept. 24. M.D.

THE NEW DIRECTOR-GENERAL OF THE ARMY MEDICAL SERVICE

The *Army and Navy Gazette* states that it is now generally understood that the new Director-General of the Army Medical Service will take up the office early in December, when he, with the Advisory Board, will have to carry Mr. Brodrick's scheme into execution. That scheme in its present form is capable of large modifications before being embodied in a Royal Warrant, and there is little doubt that such modifications will be carried out. Indeed, rumours point to a reassembly at an early date of Mr. Brodrick's Committee. It is satisfactory to know that Surgeon-General W. Taylor's early arrival in England will greatly facilitate the settlement of several knotty points. That Mr. Brodrick is in earnest in his desire to produce success is certain.

DEATHS IN THE SERVICES.

Surgeon-General William G. N. Manley, C.B., V.C., at his residence at Cheltenham on Nov. 16th, aged 70 years. He served in the Crimea, the New Zealand War, the Afghan War, and the Egyptian Expedition of 1882. He was also with the British ambulance during the Franco-Prussian War of 1870–71, and received the Iron Cross and other German decorations, as well as a French decoration. He obtained the Victoria Cross for gallantry in New Zealand. He entered the Army Medical Service in 1855 and retired in 1884. Further particulars of his life and work will be found in our obituary columns.

VOLUNTEER MEDICAL STAFF CORPS RELIEF FUND.

The sum subscribed for this fund according to the report just issued amounts to £293 14*s.* 10*d.*, which, with a donation from the Woolwich Companies sent direct to Aldershot, make a total of £314 15*s.* 9*d.* The whole amount collected, with the exception of the cost of postage and stationery, was handed over to the Royal Army Medical Corps Depôt Mobilisation Fund. It has been decided to close the fund for the present.

Correspondence.

"Audi alteram partem."

A CASE OF PESTIS MINOR IN LONDON.

To the Editors of THE LANCET.

SIRS,—I thought you might be interested in a few particulars of the case lately under my care in the West London Hospital which has been referred to in the daily papers as "a supposed case of plague." The man came to my out-patient room on Monday, Nov. 11th, complaining of lumps in his groins. He had two large, very tender buboes in those situations for which no surgical cause was apparent. On questioning him he stated that he had been suffering from, and had then, severe pain in his back, that he had had for some days a splitting headache, also some shivering but had not vomited. His tongue was covered with white fur and was red at the tip and edges; the spleen could be felt easily; the conjunctivæ, especially one, were injected. He had been in bed several days during the previous week. He had tried to work that morning, but had to give up. His temperature was 101° F. Some slightly enlarged glands could be felt in the neck and axilla. He stated that he was a lighterman and worked on a barge on the Thames and was engaged in unloading merchandise from the Baltic. Three weeks previously he had a fall and thought that the buboes started then, but he had become much worse the previous Monday and had to knock off work; he felt too ill to keep about and had to go to bed for several days.

I sent him into the hospital with a diagnosis of "pestis minor." Dr. Donald Hood kindly saw him and considered that the case was very suspicious and should be isolated. When I arrived home I telephoned to Mr. J. Cantlie who was at once very interested. I called on him and explained the case; we called for Mr. Shirley Murphy and went down to the hospital. After examining the man Mr. Cantlie agreed with my diagnosis and took some blood from one of the buboes to submit to Dr. Klein for bacteriological examination. In spite of the care taken by myself and those working with me to keep the matter secret it soon got into all the daily papers. I have just received a letter from Mr. Shirley Murphy in which he says that Dr. Klein reports that the patient must be definitely regarded as not suffering from plague, so the original diagnosis of "pestis minor" was evidently the correct one.

I am, Sirs, yours faithfully,

Manchester-square, W., Nov. 18th, 1901. ASLETT BALDWIN.

THE LONDON LICENTIATES' AND MEMBERS' SOCIETY.

To the Editors of THE LANCET.

SIRS,—A society with the above title has been formed with the hope that by combination it might be possible to bring about some improvement in the status and future prospects of the status of the Licentiates of the London Royal Colleges; it is a modest society with no other aim or object in life than the above, and I trust I may claim your sympathy for its objects. It has hitherto held no meetings, nor does it propose to bother Licentiates with more than are just enough to formulate a line of policy and possibly to elect a small committee to make an effort to carry such policy into effect. A meeting has, however, now been arranged to take place at 4.30 P.M. on Friday, Nov. 29th, at the Wimpole Hotel, 63, Wimpole-street, to which are invited all Licentiates of the London Colleges, whether members of the society or not, and at this meeting it is hoped that a plan of action may be determined on.

The one which seems to offer the best possibilities is to appeal by petition to the Royal Colleges to take into consideration the question whether they cannot by arrangement with the new University of London supply the latter with the first body of undergraduates applying to be admitted, say, to its final examinations (the question was recently raised in your columns, "Where are the undergraduates?"). Some such arrangement would seem to be rendered possible by the statutes of the University which explicitly state that it may coöperate with the Royal Colleges in promoting the objects for which the new University was established. If any better scheme occurs to anyone it is hoped that he will bring it forward at the meeting. As treasurer of the society I have promised to take the chair at the meeting and I hope to be generously supported.

I am, Sirs, yours faithfully,

Nov. 19th, 1901. FRED. J. SMITH.

SOME REMARKS ON SCURVY.

To the Editors of THE LANCET.

SIRS,—In Rhodesia amongst the natives one finds a large amount of scurvy prevalent at certain seasons; it is to be seen, however, all the year round during bad times when food is scarce; at home, nowadays, one so rarely sees scurvy that some points in my experience of this disease may be found to be of interest. I may mention that the disease with which African scurvy is most frequently confused is "beri-beri." In some books of African travel I have seen a disease called "bastard beri-beri" mentioned as prevalent in Uganda; I have no doubt that it is really scurvy. A native affected presents himself for relief complaining of swollen and painful legs. He moves with great difficulty and is short of breath; the legs are very tender to the touch, so much so that when I saw my first case I thought that I had acute periostitis to deal with. The temperature is frequently raised and the spongy bleeding gums are by no means so constant a feature as the text-books say. Sometimes epistaxis is the prominent symptom—a very fatal form and for that reason much dreaded by natives—so profuse and persistent that nothing less than plugging the whole nasal cavity will arrest it; sometimes it is a pneumonic form—whether it is a true pneumonia, however, is doubtful, and one rather inclines to the idea that it is due to hæmorrhages into the air cells; hæmorrhagic joint effusions are also common. Death usually occurs from cardiac failure. When I first treated these cases some four years ago on lines suggested in text-books I found that all my patients died, lime-juice, fresh vegetables, and various drugs proving quite useless. Since then I have paid a good deal of attention to the affection; my regret is that native superstition has prevented post-mortem examinations.

I have noticed that it is at the beginning of the rainy season that the largest number of acute cases are seen, and they continue to appear till the rainy season is over. This is not a direct climatic consequence, but may be accounted for by the fact that by the middle of the preceding dry season all the fresh vegetable food is finished, the herds are thin and poor, milk and fresh meat are therefore unobtainable, and it is not until the end of the rainy season that the natives are able to get these things, so that for a period of over six months they are obliged to live on dried grain of different sorts. Another point of interest is that in all the cases I have collected this season I have inquired into their habits of eating tainted meat, and found that they all with one exception ate meat whenever they could get it, good or bad. Whether Professor Torup's theory, however, is borne out I am inclined to doubt. A native will gorge on fresh meat as long as it remains fresh, and will continue doing so even when it is tainted, until none remains, irrespective of flavour, and in spite of all he does not get scurvy. I have seen meat cut in strips green with putrefaction serving together with porridge for the daily diet of a crowd of Zambesis who were under my observation for six months, but no scurvy broke out. It would seem that want of fresh meat in any form is the most potent factor—"bully," or salt beef, neither protects against nor cures the disease. Scurvy is always seen in the raw native; I have never seen a half-breed affected yet. The latter always lives up to his income and buys everything that the white man does, rarely living solely on meal in the form of porridge as the raw native does.

During 1900 several interesting papers appeared in the different medical journals—unfortunately, I am unable to give the references—and the causation and treatment chiefly were discussed. With regard to treatment, one gentleman advocated fresh meat juice, and I am satisfied that this or fresh meat is the proper treatment, and it would seem that want of fresh meat is the principal factor in the causation, generally coupled with hardship or privation. I give now in tabular form the points I have mentioned as obtained from the very severe cases treated as inmates of the native hospital here last season:—

Race.	Length of time since leaving kraal.	Whether eating tainted meat or fresh or both.	Amount of meat eaten since leaving kraal.
'Mtebele	5 months.	Both.	None.
'Msuto	1 year.	,,	Very little.
Gugunyanha ...	4 months.	Fresh meat only.	None; only bully.
Mnyambaan ...	4 ,,	Both.	None.
'Msuto	6 ,,	,,	,,
'Mshangaan ...	6 ,,	,,	Very little.
'Msuto	1 year.	,,	,,
'Mshangaan ...	6 months.	,,	None.
'Mshangaan ...	4 ,,	,,	None; only bully.
'Msuto	5 ,,	,,	None.
'Msuto	3 ,,	,,	,,
'Msuto	6 ,,	,,	,,

All these cases were treated with fresh meat daily, fresh vegetables, sugar, and coffee, in addition to the regular native diet—mealie meal porridge—and all recovered. I then wished to find out which article of diet was the really important one, and remembering the article above-mentioned decided to put the next patient on fresh grilled meat. Shortly afterwards a 'Mshangaan native was brought to me with swollen painful legs, spongy bleeding gums, small rapid weak pulse, painful thorax, rapid respiration, and all the physical signs of pneumonia—a very bad case indeed. I gave this man half a pound of fresh meat grilled morning and evening for three days. A general improvement in all his symptoms was manifest even then. He was then allowed his ordinary

allowance of mealie meal porridge in addition to the meat as he asked for it and I did not see that his having it would affect the validity of the test. He remained on this diet till his discharge from hospital some three weeks later. I purposely stopped vegetables in his case. Two other cases have been treated on the same lines since with marked success.

Another point I have noticed is a curious latency of this disease which an accident appears to bring into life. I will cite a couple of instances. A native broke his leg; it was immediately put into splints; next day he had a huge blood blister at the seat of fracture. I examined him for scurvy but could find no other sign; when the fracture was taken down at the end of seven weeks no union had taken place. Next day the leg was swollen and painful, and a few days subsequently the characteristic gums appeared. Evidently scurvy was in the system at the time of the accident, although no signs showed except the superficial blood blister. Recently an accident occurred in one of the mines. A native sustained a compound depressed fracture of the skull and fractured thigh; after the necessary operative measures had been taken and the patient had been in hospital for five weeks one day his gums were found bleeding. This was quite a recent development, for on admission I had examined especially for scurvy, knowing how hopeless surgical cases are likely to be when affected in this way. A day or two afterwards he had a profuse hæmorrhage into the bladder. He was at once put on one pound of fresh-grilled meat daily and did well, being able to go about 10 weeks from the date of the accident. Fresh meat-juice has been used, I am aware, in scurvy rickets in children, and no doubt in scurvy in a few cases in Europe, but the importance of fresh meat in the prevention and cure of the disease has hardly been sufficiently emphasised or demonstrated in Africa where the disease is so common, especially on the mines.

I am, Sirs, yours faithfully,

Rhodesia, June, 1901. WILLIAM REDPATH, M.B. Lond.

EFFICIENT VACCINATION.

To the Editors of THE LANCET.

SIRS,—It seems an extraordinary thing that in the country of the foundation of vaccination it is almost impossible to get reliable vaccine, or certainly not when it is most wanted—on the outbreak of an epidemic of small-pox. In September and October, when all our patients were requesting revaccination, we private practitioners sought for vaccine from the usual trade advertisements, for to us is declined the Government lymph. (Hearsay evidence says that even the Government lymph is no more reliable than that available by trade advertisement.) A great many like myself soon noticed that hardly any of the patients "took" in the slightest way. Then came a period in which arms that were vaccinated did take, but exceedingly late—i.e., after 14 days; and latterly the vaccine has begun to take very well in the normal way—viz., soon after the third day in revaccination and soon after the fifth day in primary vaccination. Now all this points to the fact that since the introduction of glycerine we are subjected to all varieties of dilution, and the trade, to meet the sudden demand, have played us false by stretching their supplies instead of honestly declining to alter their original standard strength. Some of my medical friends profess to have been getting a French vaccine which is marvellous, but when I hear of any vaccine taking so superbly in every arm I am inclined to think there are other germs besides those of vaccinia; in fact, in one case I heard of eight in family being all ill in bed with such bad (or so-called good) arms. My own feeling is that if I cannot get good lymph in England I shall give up advising anyone to be vaccinated. But surely Government must be forced to supply everyone with a standard lymph. Every large city or the capital of every county should have a calf vaccine establishment under Government control. Medical men who are not public vaccinators are quite willing to pay for the lymph, but what we want is an absolutely standard vaccine. Owing to this recent supply of useless lymph many people look upon us as incapable vaccinators or, still worse, as taking fees under false pretences.—I am, Sirs, yours faithfully,

J. KINGSTON BARTON.

Courtfield-road, Gloucester-road, S.W., Nov. 18th, 1901.

THE ETHICS OF THE PUBLIC VACCINATOR.

To the Editors of THE LANCET.

SIRS,—Will you allow me as a public vaccinator to protest—and in doing so I am sure I am voicing the feelings of others—against the circular to which you referred last week?

A few days ago I received a notice asking me to join the association, but on reading the paragraphs to which you allude I at once threw it into the waste-basket. Next we shall be asked to put public vaccinator on our plates, or, better, on a coloured lamp. For a body of men to issue such a circular in the name of the public vaccinator is an impertinence which I for one resent most strongly. Unfortunately, the more respectable members of the profession who happen to be public vaccinators will be tarred with the same brush as the gentlemen responsible for the proclamation. It is disgusting and degrading.

I am, Sirs, yours faithfully,

Guiseley, Yorks, Nov. 18th, 1901. W. H. CHEETHAM.

To the Editors of THE LANCET.

SIRS,—It is quite evident that the private vaccinator is aggrieved by the working of the present Act and has some cause for complaint. If it were the duty of the vaccination officer to ascertain the cases in which free vaccination is required and a list of these cases only were sent to the public vaccinator the grievance would cease to exist. The onus of refusing vaccination should rest on the parent or guardian and be decided by his or her statement to the officer. The present system leads to unnecessary professional, or possibly unprofessional, visits and to ambiguity in the legal position. The business of the public vaccinator should be to vaccinate, certify, and nothing more, and his fee ought to be adequate to the work involved. The "calling to offer to vaccinate" is most objectionable and in this lies the chief offence. At the same time if private vaccinators wish to hold their own they must all adopt aseptic precautions. I find that the public are beginning to recognise the sealing up of the vesicles from contamination as a less objectionable method from their point of view. I have now for some time used a small pad of alembroth gauze held in position by a strip of simple holland plaster, which can be cut to the shape of the arm, and have found this dressing satisfactory to the patients and myself. The gauze is renewed on the eighth day, with instructions that if irritation or discharge appear the child is to be brought for inspection. In a very small number of cases I have found it necessary to do a few subsequent dressings with the addition of some antiseptic powder. If the private vaccinator does not adopt precautions in sterilisation and dressing his results will tell against him and, while admitting his grievance, I think in this matter he might learn something from the instructions of the Local Government Board. I am, Sirs, your faithfully,

Loughborough, Nov. 18th, 1901. J. B. PIKE.

To the Editors of THE LANCET.

SIRS,—You give great prominence[1] to a letter from a "General Practitioner," which deals with circumstances which are surely peculiar to a particular district. They do not prevail universally, and as a public vaccinator myself I protest against serious accusations being hurled at a branch of the profession broadcast when they can only apply to isolated examples.

It is quite easy to answer the questions asked if you know the exact wording of the Vaccination Act, which I strongly suspect "General Practitioner" does not. 1. A public vaccinator can claim no payment for vaccination of persons residing outside his district. It is therefore clear that he will not perform such operations except in the case of private patients, who will themselves pay him. No grievance can be made out of this. 2. A public vaccinator cannot "charge the authorities" for work done by any person except himself, or, in case of emergency, by his registered deputy. 3. A public vaccinator should not tout for cases. If heads of firms require interviewing in the interests of public health for revaccination of employés this is the duty of the medical officer of health. The public vaccinator is nowhere authorised to vaccinate

[1] THE LANCET, Nov. 9th, p. 1300

any cases save those which voluntarily apply to him. 4. Revaccination is not compulsory, and every adult can please himself by whom he is revaccinated, or whether he is revaccinated at all, or not. 5. No public vaccinator has any power to make "a house-to-house inspection." He could be kicked out as a trespasser. 6. Such a procedure as suggested would be highly improper and the public vaccinator would be liable to action by the parents for assault upon the children. The position, however, could only possibly arise in a population of unvaccinated children, such as, I hope, is extremely rare. 7. The fees are the same everywhere: 5*s.* for primary vaccinations at the patients' homes, inclusive of all extra visits and treatment, and 2*s.* 6*d.* for revaccinations of adults at any place agreed upon. There is power for authorities to give mileage allowance as well; but few do it.

In conclusion, Sirs, let me advise "General Practitioner" and other complainants to get (from Messrs. Eyre and Spottiswoode) a copy of the "Amended Regulations," dated Oct. 18th, 1898, issued by the Local Government Board, and they will find there the solution of all their difficulties, without needing to write letters in THE LANCET.

I am, Sirs, yours faithfully,

Nov. 11th, 1901. G.P. AND M.O.H. AND P.V.

To the Editors of THE LANCET.

SIRS,—I think it only fair to the public vaccinators to point out that the Public Vaccinators' Association represents exactly 10 per cent. of the public vaccinators; its membership being 300 and there being 3000 public vaccinators. I have no doubt that the vast majority of public vaccinators would join with me in repudiating the proclamation and in thinking that a proclamation in any form is in bad taste and uncalled for.

I am, Sirs, yours faithfully,

Nov. 16th, 1901. P.V.

To the Editors of THE LANCET.

SIRS,—I was much interested in your leading article in THE LANCET of Nov. 16th on the relations existing between the medical profession and the public vaccinator. I am, and have been for the past 20 years, one of those individuals who it appears are accused of "poaching upon the patients of their professional brethren." I may as well state in the first place that I am not a member of the Association of Public Vaccinators for England and Wales. As regards the proclamation which was published very widely in the lay press on Nov. 9th by the Association of Public Vaccinators I feel that owing to the sentiments of professional jealousy which obtain at the present time toward the public vaccinator it was possibly indiscreet on the part of the association to publish the proclamation in question; at the same time I fail to see any reason why the proclamation should be withdrawn. With one exception it contains nothing but what is embodied in the Act of Parliament and the regulations of the Local Government Board relative to vaccination. The exception to which I allude will be found in "the offending third clause of the circular of the organising secretary of the Association of Public Vaccinators for England and Wales," which states that public vaccinators are "compelled to use that lymph in all cases of vaccination and revaccination in their own district." This is not the fact. Public vaccinators are at liberty to employ any alternative supply of lymph they may think fit provided it is glycerinated calf-lymph, and they (the public vaccinators) assume all responsibility as to quality, &c. My experience of the glycerinated calf-lymph issued by the Local Government Board is that such lymph is perfectly unreliable and is therefore to be avoided, and if used will cause a great amount of extra trouble and anxiety.

Regarding the ethics of the public vaccinator, my opinion is that they compare very favourably with those of the so-called private practitioner. In my neighbourhood the "private practitioner" does not scruple to vaccinate in only *one* or *two* insertions, but performs the operation *gratuitously*, which practice I think approaches, if not attains, the art of "poaching."—I am, Sirs, yours faithfully,

A PUBLIC VACCINATOR OF TWENTY YEARS' STANDING

Nov. 16th, 1901.

SOCIETY OF APOTHECARIES *v.* PURDUE.

To the Editors of THE LANCET.

SIRS,—The attention of the Society of Apothecaries has been drawn to the very misleading reports of this case which have appeared in the daily papers. These reports, which are considerably abbreviated, would seem to leave the impression that the defendant, who described himself as a registered herbalist and against whom proceedings were taken by the Society under Section 20 of the Apothecaries Act, 1815, was protected by the Act of 34 and 35 Henry VIII., c. 8, sometimes, though without authority, referred to as the Herbalists Act, and that the provisions of the latter Act practically ousted those of the Apothecaries Act. This is quite inaccurate.

The Act of Henry VIII. was certainly discussed in argument, but its application to this case was clearly refuted by the Society's counsel, though he was unable, as is the fact, to show that the Act had been expressly repealed. The learned county court judge, however, in giving judgment for the defendant, in no way purported to base his decision upon the Statute of Henry VIII., but simply held, as a jury (had there been one) might have held, that the evidence adduced did not show that the defendant had practised as an apothecary—that is to say, his judgment was based not upon a question of law but upon one of fact. The case, therefore, can under no circumstances be quoted as a precedent against the Society, nor can the learned judge's decision be considered as ruling that a herbalist, or any other unqualified medical practitioner, by virtue of the Act of Henry VIII. to which I have referred, may practise as a qualified medical man. I may also add that a county court judgment even in courts of coördinate jurisdiction is never recognised as a binding authority, and *a fortiori*, of course, not in the higher courts.

In conclusion, I may say that the question of an appeal is being seriously considered by the Society, but in any event the result of the case above referred to will not cause the Society to relax in the slightest degree its efforts to repress unqualified practice.—I am, Sirs, yours faithfully,

A. MOWBRAY UPTON,
Deputy Clerk.

Society of Apothecaries of London, Blackfriars, London, E.C.,
Nov. 19th, 1901.

THE FORTHCOMING ELECTION OF DIRECT REPRESENTATIVES.

To the Editors of THE LANCET.

SIRS,—I have sent the following letter to each of the candidates for the vacant seats on the General Medical Council, and also to Mr. Victor Horsley. The answers are given below. May I ask you to insert them in your next issue.

I am, Sirs, yours faithfully,

Fellows-road, N.W., Nov. 19th, 1901. F. R. HUMPHREYS.

Re the Election to the General Medical Council.

DEAR SIR,—It has been suggested in the correspondence columns of the *British Medical Journal* that, with a view to quickly settling the midwives question, all the medical practitioners of Great Britain should decline to go when summoned to obstetric cases of difficulty or danger when it is known that a midwife is or has been in attendance. This suggestion is already being acted upon.

May I ask whether, in the event of your candidature proving successful, you will, in the interests of humanity and of our common profession, discountenance any such action on the part of medical men, whether concerted or otherwise?

As I propose sending your reply to the medical papers, may I trouble you to put it in as concise a form as possible?

Yours very faithfully,

Nov. 16th, 1901. F. R. HUMPHREYS.

P.S.—As the time is very short may I suggest a telegram in reply.

REPLIES.

Dr. S. Woodcock telegraphed:—

Strongly discountenance such action. Will write.

His letter follows:—

When speaking at Stratford on the 8th inst. I expressed disapproval of concerted action on the part of medical men such as that to which you allude in your letter. I said that this attitude was not high-minded nor patriotic, neither calculated to gain the ear of Parliament nor the sympathy of the public, but was rather likely to promote legislation that would be unwelcome to the profession.

Dr. Hayward telegraphed:—

Heartily condemn such proceedings as unreasoning cruelty. Writing further.

In his letter he said:—

I cannot imagine any member of an honoured profession wilfully endangering the life of any woman in labour by refusing to assist her in any difficult or dangerous situation simply because a midwife has been in attendance. This shows a want of common sense, in my opinion, as, in blind revenge on midwives in general, the men so refusing endanger the lives of poor women, and I hold that if any man refuses to attend and there is no time or opportunity to get other help, the man is really culpable for any danger which comes to the patient,

and if fatal results occur is morally guilty of manslaughter. While doing all in my power to place obstetric nurses in their proper position, under the direct supervision of some qualified and registered medical man in all cases, I should most heartily condemn anything like systematic cruelty to poor women in danger, as even if its results were what is evidently desired I consider it would be an unwarrantable cruelty.

Mr. George Brown replied as follows :—

I am much surprised that you should deem it necessary to ask such a question as, in your letter of the 16th inst., you have made yourself the mouthpiece. It has been my invariable custom since I have had the honour of belonging to the medical profession, if well enough, to go to all cases of midwifery emergency, regardless of the question of payment or who may have been in attendance. After well-nigh 30 years of practice I certainly should not say or do anything contrary to my established rule, whether successful or unsuccessful at the forthcoming election.

Fearing that Mr. Brown had misread my letter I wired as follows :—

Please reply to my only question—your attitude, if re-elected, towards medical practitioners acting as mentioned in my letter.

In reply I received a note as follows :—

I wrote and posted reply to you about two o'clock this morning. I am overwhelmed with work and find it very difficult to reply to all my correspondents.[1]

Mr. George Jackson answers as follows :—

In reply to yours received to-day I may say that I do not approve of the method suggested and could not countenance it in any way. At the same time, I think a medical man is quite justified in demanding that the midwife should retire from the case before he undertook it, especially if it was known that she habitually exceeded her duties.

Up to the time of writing no reply had been received from Mr. Victor Horsley.

To the Editors of THE LANCET.

SIRS,—As the election of a Direct Representative for Scotland to the General Medical Council only takes place once in five years and as it is now upon us the present is a time of considerable importance in the medical world. Three candidates solicit our suffrages. Of Dr. Norman Walker I know little either for or against, except that he is an Edinburgh consultant and therefore probably unsuitable for representing the profession, 95 per cent. of whom consist of general practitioners. By consultant, so far as this letter is concerned, I mean either a consultant proper or a general practitioner with hospital appointment who seeks to attain consultant or *quasi*-consultant work. Of the other two candidates, Dr. W. Bruce of Dingwall, the present representative, is also practically a consultant. The third candidate, Dr. C. E. Robertson, is a general practitioner in Glasgow. It is significant to observe how the caste of the latter two candidates is reflected in the *personnel* of their committee and supporters. Dr. Bruce's partisans consist largely of West-end consultants, who are concerned mainly with the conservation of their caste privileges and not with the welfare of the general practitioner. Dr. Robertson's supporters, on the other hand, consist almost wholly of general practitioners. It will thus be seen that the forthcoming election practically resolves itself into a battle between the consultants on one side and the general practitioners on the other. Now I desire to express most strongly my opinion that we have been too long under the rule of the consultant fraternity, and that medical politics have suffered gravely in consequence. The very fact that the members of this order are strenuously supporting Dr. Bruce should in itself be a strong reason for the rank and file of the profession to vote for Dr. Robertson, who is one of themselves, and accordingly is intimate with the exact nature of their grievances and requirements. Moreover, out of the seven members who are sent from Scotland to the General Medical Council six, in whose election the bulk of the profession have no voice, are consultants; with the exception of the Crown nominee these are elected by close corporations of the more highly favoured members of our profession, who, of course, take good care to return one of their own caste. Surely then, if these exalted and favoured few are allowed to return six out of seven members, the general practitioners are entitled to return the seventh

Although Dr. Bruce professes to be solicitous for medical reforms that would improve the position of the general practitioner, yet when a specific case comes before the Council he is found on the side of the party at present in power. In the *British Medical Journal* of Dec. 22nd, 1900, Dr. Bruce, referring to the then recent and now notorious case of Dr. J. M. Thomson of Airdrie, which involved issues of vital importance to hundreds of medical practitioners in Scotland, while ostensibly condemning the action of the Pharmaceutical Society, actually admits that he voted along with the other Direct Representatives for the prosecution. His exact words are: "And yet in this particular case, if I am not mistaken, all the Direct Representatives—however unwillingly—voted for prosecution, as the offence libelled seemed to them a scandal against the profession as a body and one that had either to be proved or disproved at the earliest possible moment."

In view of these facts and considerations it should not be difficult for the electors, the great bulk of whom are general medical practitioners, to choose between the nominee of the professional oligarchy and the popular candidate who will protect their interests and vindicate their rights.

I am, Sirs, yours faithfully,

Nov. 8th, 1901. JAMES FORRESTER, M.B., C.M. Glasg.

To the Editors of THE LANCET.

SIRS,—Of the three Scottish candidates for the position of Direct Representative to the General Medical Council Dr. Norman Walker alone in his address expresses his views regarding the anomalous position of the Scottish parochial medical officers, he being in favour of a more secure tenure of office for these medical officers. I trust that Dr. Bruce and Dr. Robertson will also give us their views regarding the grievances of the Scottish parochial medical officers and especially of those in the remote Highlands and islands. Other things being equal, I should advise all those medical officers in the remote parishes who signed the memorial recently presented to Parliament to vote for the candidate who is most in favour of the reforms we desire.

I am Sirs, yours faithfully,

JAMES F. D. MACARA, M.B., C.M. Glasg.,
Medical Officer, Durness, Sutherlandshire, N.B.

Nov. 18th, 1901.

To the Editors of THE LANCET.

SIRS,—I have been hoping week by week to see in your correspondence columns some expression of what I have reason to believe is a very general opinion concerning the forthcoming election of Direct Representatives. It will be remembered that in 1886 the profession came to the deliberate conclusion that of the three Direct Representatives allotted to England and Wales justice demanded that at least two should be practitioners resident in the provinces. To this conclusion effect was duly given by the return of Sir Walter Foster and Mr. Wheelhouse; and the same just division of the representation was again accorded in 1891. By a series of accidental circumstances in 1896 and 1897 it fell out that the whole three representatives of the profession were London practitioners—a result which has ever since been felt to be most anomalous and, indeed, most unfair to our provincial brethren. The retirement of Dr. Glover simplifies the present position immensely, because the great respect so generally felt for him would probably have led to his return if he had again become a candidate, and thus, in some degree, to a continuance of the anomaly and injustice above referred to. Now the ground is clear; and I am sure that I am voicing the opinions of many in suggesting that every practitioner in London should on the present occasion make a special point of recording his votes for the two provincial candidates. There is no need to introduce the slightest element of personality into a matter which should only be considered on the basis of justice, fair play, and indisputable principle. It would be, in my humble judgment, a most undeserved disrespect to our provincial brethren were it suggested that they do not possess gentlemen of such high honour and ability amongst themselves as to make admirable representatives of the whole profession. I feel sure that they would scout the idea that it is necessary for them to depend upon men resident in London to obtain fit representatives of their views and wishes. It may, therefore, be safely assumed that every provincial practitioner, without exception, will on this occasion vote for the two provincial candidates, and I would venture to suggest that it would be a kindly and a courteous action if a number of leading practitioners in London would sign a letter for publication in your columns expressing their intention to

[1] Mr. Brown has written to us protesting against such questions being put to him.

give their votes and support also to those candidates on the *primâ facie* grounds of justice to which I have alluded.

I am, Sirs, your obedient servant,

Nov. 12th, 1901. F.R.C.S.

To the Editors of THE LANCET.

SIRS,—In my opinion one paragraph of Dr. C. E. Robertson's letter to the medical practitioners of Scotland is worthy the attention of those of England. I refer to the recent action of the General Medical Council with reference to registered practitioners fined under the Pharmacy Act. As he says, when a chemist's assistant is fined under that Act, as is frequently the case, the chemist bears no more of the matter, and why should a medical man be more punished for a breach of the Pharmacy Act than those who are qualified under that very Act? I do not uphold medical men breaking this Act and I do not sympathise with them when they are fined for doing so, but I do consider it an arbitrary abuse of authority to try to stretch the "infamous conduct in a professional respect" clause into covering a thing that has nothing to do with professional conduct. If I knew which of the English candidates were opposed to the action of the Council in the recent Thompson case, where a medical man was threatened with erasure from the Register because his assistant was fined under the Pharmacy Act, I would certainly vote for them and I know that several of my professional acquaintances in this neighbourhood feel as I do in the matter. Perhaps it is not too late to ask the English candidates their views on the subject.

I am, Sirs, yours faithfully,

Deptford, S.E., Nov. 15th, 1901. AN APOTHECARY.

THE PLAGUE.

To the Editors of THE LANCET.

SIRS,—It seems expedient in view of present knowledge to admit that recrudescence of plague in a city with accompanying affection of the rats means that the disease is probably present as an epizootic and that its further spread is independent either of the sanitary condition of the locality where the sporadic human cases have happened to occur or of the incubation period of plague in the human subject. "Contacts" now mean not those who have been exposed to human plague, but those who may become exposed to rat-infection. If every affected rat has been destroyed the disease will disappear; if not its future course will probably follow the slow history of all such outbreaks—an apparent cessation for weeks or months, the rat-infection spreading meanwhile, then a sporadic human case or cases in some fresh locality where opportunity occurs for rat-infection of the occupants of defective premises, and so on. Destruction of rats as a method of preparation against invasion is obviously indicated in every district, but it is practically impossible to disturb the public apathy until invasion occurs, when it is too late. Mr. Wynter Blyth suggests a crusade by sanitary authorities directed towards the rectification of defects in basements of premises permitting access of rats. Such a crusade is highly necessary in the case not only of grain warehouses and riverside premises, but of private dwellings, and, setting plague aside, could result in nothing but good in districts adopting the suggestion.

I am, Sirs, yours faithfully,

D. S. DAVIES, M.D. Lond.,
Medical Officer of Health of Bristol City and Port.

Public Health Department, Bristol, Nov. 11th, 1901.

To the Editors of THE LANCET.

SIRS,—I have read the notice in THE LANCET of Nov. 9th (p. 1283) of the *first suspected case of plague* in Liverpool. Without attempting to controvert the accuracy of the diagnostic suggestion, I would point out that the description of symptoms and physical conditions will correspond exactly with those of the "fever of over-exertion" of which my original description was brought before the (now Royal) Academy of Medicine in Ireland in 1887—with the complication of "constitutional bubo," which is also a pathological entity of Irish enunciation, having been first described by the late Mr. Abraham Colles of Dublin in the earlier part of the nineteenth century. I know of an exactly similar case which occurred in the person of a medical man of great mental energy whose muscular nutrition had been allowed to run down during a long period of sleepless nights. He performed some muscular over-exertion and was feverish next day, with a temperature of over 103°F. The glands in the right groin became inflamed, suppuration occurred, the convalescence was very slow, but no surgical operation was performed, and the patient is now living. I would very much like to know whether the victim of "suspected plague" was a trained athlete or a mere novice at football. The fever of over-exertion described by me is usually seen in persons who make some severe continuous effort when in bad muscular training. I am, Sirs, yours faithfully,

Dublin, Nov. 13th, 1901. JOHN KNOTT, M.D. Dub.

MILK OR WHEY IN ENTERIC FEVER?

To the Editors of THE LANCET.

SIRS,—I feel it necessary to apologise for again trespassing upon your valuable space, but the paper of Mr. Prideaux Selby in THE LANCET of Nov. 2nd, p. 1182, upon the dietetic treatment of enteric fever, and his remarks upon the danger of overlooking the teachings of morbid anatomy seem to me to be of interest and importance. It is well known that ulceration in enteric fever is most marked almost immediately above the ileo-cæcal valve. On several occasions I have seen ulceration limited to the Peyer's patch in that situation, and in one instance, although ulceration was strictly localised to a Peyer's patch about four inches above the ileo-cæcal valve, perforation had taken place. The frequent severity of the ulceration in this situation suggests that the holding back of bacilli-laden fæces by the ileo-cæcal valve gives the microbes time to attack and destroy the lymphoid structures. A case of enteric fever where constipation had been extreme is instructive when viewed in this light. The large intestine was full of very hard fæces and ulceration had occurred from the cæcum almost to the anus. The ulceration in places was so extensive that the entire wall of the colon had been removed over areas which together must have measured between two and three square inches, yet owing to the hard nature of the fæces peritonitis had been delayed. Even the micro-organisms normally present in the intestines may sometimes produce ulceration when there is stasis of fæces. In 1899 I exhibited before a meeting of the Bristol Medico Chirurgical Society a portion of the ileum from a case of intestinal obstruction, in which the coil that had been strangulated showed ulceration of Peyer's patches and of the solitary follicles, bearing a close resemblance to the ulceration of enteric fever. It may be added that the ulceration of the cæcum so frequently present in cases of obstruction of the large intestine is another example of the power of micro-organisms present in fæces to attack the intestinal wall. In enteric fever it is not merely, however, severe ulceration which one has to fear as a result of abundance or slow movement of fæces. Morbid anatomy indicates that septic absorption takes place chiefly from the lower few inches of the ileum, since it is in the mesenteric glands in immediate relation to this small portion of the intestine that swelling, or it may be sloughing or suppuration, generally occurs. We may not be able to kill the bacilli when they have obtained entrance to the body, but the situation of the intestinal lesions seems to suggest that if the bacilli could be deprived of nourishment, or if they could be continually hurried past the junction of the small and large intestine, their power of doing harm would be much diminished. In other words, the situation of these lesions suggests that the diet should be as free as possible from organic substances which will not be readily absorbed and that anything approaching to constipation should be carefully combated. This opportunity may be taken of making a suggestion in connexion with intestinal antisepsis. Petroleum emulsion seems to be of some value as an intestinal antiseptic in children. Dr. Robert Hutchison has shown that it is not absorbed, and being therefore harmless it could be used in considerable quantities. Possibly it might be found to be of service in enteric fever.

I am, Sirs, yours faithfully,

Clifton, Bristol, Nov. 9th, 1901. THEODORE FISHER.

To the Editors of THE LANCET.

SIRS,—In reply to the question asked by Mr. Prideaux Selby on p. 1186 of THE LANCET of Nov. 2nd as to the diet of enteric fever patients at Maidstone I may say that at the West Kent General Hospital, where about 80 of the more

severe cases were treated, the diet was, almost without exception, one of pure milk. This alone was given until the temperature had remained below 99° F. for a period of 10 days. As we only admitted cases of especial severity our mortality exceeded the total rate considerably, 12·5 per cent. Many of the deaths were from pneumonia soon after admission; only one relapse occurred, and intestinal complications were remarkably few in view of the gravity of the cases.

I am, Sirs, yours faithfully,

FRED. T. TRAVERS, B.S. Lond., F.R.C.S. Edin.,
Surgeon to West Kent General Hospital, Maidstone.

ACUTE DILATATION OF THE STOMACH.

To the Editors of THE LANCET.

SIRS,—The views communicated by me to THE LANCET of Nov. 2nd, p. 1228, so far as they relate to *duodenal pressure-obstruction*, have been paid the compliment of a notice by Dr. Theodore Fisher and that of adoption by Dr. C. R. Box and Mr. C. S. Wallace. Indirectly they derive some importance from the circumstance that in this country, so far as I am informed, no recognition had previously been awarded to the three fundamental points in connexion with this affection viz., (1) the evidence that obstruction is the mechanism of the dilatation; (2) the localisation of the obstruction in the third part of the duodenum; and (3) the special indications for its treatment. I wish to be corrected if it should be a false impression that the articles embodying the recent teaching on this subject and the discussion before the Royal Medical and Chirurgical Society had left us without any definite etiology, without any mention of duodenal occlusion,[1] and without any adequate suggestion for its relief, but still committed to a mysterious theory of active paralytic expansion for which strychnine would be a suitable treatment. From the papers of Dr. Box and Mr. Wallace in the Transactions of the Clinical Society of London for 1898 and in THE LANCET of Nov. 9th, 1901, p. 1259, it must be concluded that they have now largely modified their original view in favour of the principle of duodenal occlusion and of the therapeutical consequences which it involves. I entirely agree with their remark that a correct diagnosis has been found by many to be a matter of difficulty, though it ought not to be difficult. Moderate dilatations would still more readily be overlooked; and, indeed, this very frequently happens. In this connexion it is necessary to mention that very few, if any, of the published cases of so-called "acute dilatation" are provided with satisfactory evidence that gastric dilatation did not obtain in them prior to the acute symptoms; for this opens up important considerations to which I shall presently allude. Although the results of post-mortem experiments can hardly be applied without reservations to the elucidation of the behaviour of morbid viscera, satisfactory evidence has been obtained by Dr. Box and Mr. Wallace that a stomach charged with a sufficient weight of fluid will avail to compress the duodenum against the spine; and this furnishes a reply to the doubt expressed by Dr. Fisher, by demonstrating one of the modes in which a duodenal occlusion which might have been slight at first may be made absolute by a growing distension of the stomach. This instructive experiment may also explain one of the modes of origin of the occlusion. The water-pressure sufficed in itself to keep up the obstruction even after the overstretched tissues overlying the transverse portion of the duodenum had been divided. By their division the outflow on raising the fundus from the spine would be facilitated, but it is not proved that so long as they remained undivided they did not avail to check it at least in part.

From a practical standpoint the most important questions are the antecedent condition and the determining cause as possible guides to prevention and to timely treatment. It is probable, and it may eventually be proved, that gastric dilatation and gastroptosis are antecedents in a majority of the cases, whilst exhaustion, combined with malnutrition or marasmus, is a specially predisposing cause. The chief determining cause is atony of the stomach (particularly if associated with intestinal collapse) in combination with continued *dorsal decubitus*. This causation belongs to cases which are found after death to be free from coarse structural lesions; but in other instances various local abnormalities may take a large share in the result. In cases of pure debility from abdominal marasmus, surgical shock, or toxæmia, the dorsal decubitus places the enfeebled gastric and duodenal peristalsis at a disadvantage; but in the stage of exhaustion when enteroptosis or a previous gastric dilatation has caused the pyloric portion to subside into the right vertebral groove it becomes a danger. This should be borne in mind in predisposed cases, particularly after severe operations; for in the early stage the progressive duodenal compression might be prevented by suitable posture, or by other means if the patient be unable to be moved. Concerning operative measures, should they become necessary, I cannot venture to speak without diffidence, but I cling to the impression that gastro-jejunostomy may not be the only, and may not in all cases be the most desirable, procedure, and that something might perhaps be achieved by suitable manipulation of the viscera in cases where the postural method can be applied after the operation.

In conclusion, these fragmentary suggestions cannot pretend to do full justice to the intricate subject, or to the writer's views. There are various forms of "duodenal pressure-obstruction," a separate discussion of which is beyond the compass of this communication. But the essential has been done if sufficient attention has been called to its existence, as a first step towards its successful treatment.

I am, Sirs, yours faithfully,

Curzon-street, W., Nov. 11th, 1901. WILLIAM EWART.

[1] I find that the recent work of Mr. Mayo Robson and Mr. B. G. A Moynihan contains a short reference to the subject, in connexion with P. Miller's paper in the Deutsche Zeitschrift für Chirurgie, August, 1900.

THE PREVENTION OF ASPHYXIA WHEN THE BIRTH OF THE AFTER-COMING HEAD IS DELAYED: A HISTORICAL NOTE.

To the Editors of THE LANCET.

SIRS,—Allow me to say a few words in reply to Dr. G. F. Blacker's "Historical Note" in THE LANCET of Oct. 19th, p. 1033. Dr. Blacker says: "The passage of a catheter or special tube into the child's mouth when the head is lying high up in the pelvic cavity is only likely to lead to a waste of valuable time, while if the head is sufficiently low down in the pelvis to admit of air reaching the mouth if the perineum be retracted its immediate extraction should be a matter of little difficulty," and later he quotes Dr. Barnes: "The real problem is to get the head out of the pelvis," to which he adds, "And to this advice one may safely add the qualification, *as rapidly as possible*."

Firstly, I would say that the passage of a catheter into the child's mouth when the head is lying high up in the pelvic cavity would be utterly unnecessary, inasmuch as the circulation of the cord would not be in any way obstructed. When, however, the head is sufficiently low so that pressure on the cord results it is, I believe, always possible to find the mouth with a catheter guided by the finger. The waste of valuable time exists only in Dr. Blacker's imagination; the veriest bungler would have the catheter in the child's mouth in three seconds, and every midwifery bag contains a catheter. Dr. Blacker then goes on to say that, "if the head is sufficiently low down in the pelvis to admit of air reaching the mouth if the perineum be retracted its immediate extraction should be a matter of little difficulty." Now, I should like to ask a question: How does Dr. Blacker account for the high mortality of breech cases if this assertion be true? Anyone will tell him that it is possible for the mouth to be well within reach of the finger and yet for the occipito-frontal diameter of the child's head to be fixed in one of the oblique diameters of the pelvis. Indeed, this is where the hitch usually occurs, and it is then that the pressure on the cord takes place, and it is then that Dr. Blacker recommends that somewhat difficult operation of applying the forceps, an operation which necessitates a delay of at least three or four minutes. Again, traction on the jaw is recommended, a most iniquitous proceeding to my mind. Think of it—the act of pulling forcibly upon the jaw of a tender infant! To do any good at all it must be forcible, and if the children on whom it has been practised were followed up who knows but what it would be found that they developed into those unfortunate people who are always dislocating their jaws at awkward moments. Balance the "valuable time" lost in inserting the catheter against four minutes required for applying the

forceps; also, the forceps can still be applied, if necessary, with the catheter *in situ*. Traction on the jaw I put in the category of "meddlesome midwifery"; in fact, the less traction we indulge in the better, for traction of itself has great and serious dangers. Finally, I submit that the "real problem" is not "to get the head out of the pelvis as quickly as possible"; it is absolutely and seriously different; it is to bring *a living child into the world with the least possible amount of damage to it or the mother*. I admit that I have only had one cathetered case on which to argue (my "one ounce of practice"), but I have not the slightest doubt that if a catheter was passed as routine treatment when the hitch occurred, followed by a masterly inactive wait, finally forceps if necessary, we should have an upheaval of statistics of mortality in breech presentations; if, on the other hand, we follow Dr. Blacker's precepts the mortality of 1 in 11 (Dubois) or 1 in 3½ (Churchill) will stand for aye.

I am, Sirs, yours faithfully,

Queen's-road, Richmond. GEORGE W. ORD.

A SIMPLE APPARATUS FOR ETHER NARCOSIS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 9th, p. 1297, I observe a letter by Dr. Leonard Williams describing an ether inhaler which had been shown to him some months previously by Dr. Longard of Aix-la-Chapelle. As the inhaler referred to by Dr. Williams is practically identical in design and appearance with that devised by me 17 years ago and described in THE LANCET of July 5th, 1884, p. 19, it will be interesting to learn the source from which the inhaler recommended by Dr. Longard has originated.

I am, Sirs, yours faithfully,

P. BLAIKIE SMITH, M.D. Aberd.

San Remo, Italy, Nov. 16th, 1901.

THE FREEZING-POINT OF THE BLOOD AND SECRETIONS AS AN AID TO PROGNOSIS.

To the Editors of THE LANCET.

SIRS,—I read Professor Ogston's article on cryoscopy in THE LANCET of Nov. 9th, p. 1253, with great interest, but I finished it unconvinced of the unique value which he claims for the new procedure probably through my want of understanding, and I am sure he will accept my criticisms as made in the spirit of inquiry. In the first place the value of the observations recorded is much diminished by our ignorance of the cause of the variation in the freezing-point of the blood; in no instance is this more evident than in the cases where it is above normal. Professor Ogston in regard to this writes of an "unusual purity" of the blood. If his milkman were to supply him with milk deficient of 10 per cent. of its cream and of too light a specific gravity would he regard it as unusually pure? And how are we to rely on cryoscopy as an indication of renal sufficiency or insufficiency if, as is stated, it is also an index of hepatism? However, I chiefly wish to consider the practical bearing of this test, and this is best done by taking *seriatim* the cases advanced as proof of its value, assuming that the essential facts for such proof are quoted. I fail to see, almost without exception, that anything has been proved that could not have been proved with other more definite and better understood tests.

In Case 1, assuming that disease indicating casts were absent and that the total output of urea was satisfactory, a trace of albumin would hardly be considered a contra-indication to study. In Case 2 we are not told the specific gravity of the urine or the daily output of urea or the cause of death, so that no estimate of the value of cryoscopy is here possible. In Case 3 the test is superfluous. In Case 4 might not the cryoscopy taken at different times have shown as variable a condition of the blood as the specific gravity did of the urine?—there was here no indication of renal insufficiency. In Case 5 there appears to have been no contra-indication to work, so that the test was superfluous. In Case 6 (the reading given being 0·556, I assume that a different scale has been used from that described) why is $\frac{8}{10}$° above normal slightly unfavourable when Cases 1 and 4, $\frac{5}{10}$° and $\frac{4}{10}$° above normal, are favourable indications? In Case 7 we are not told the blood-count or whether the specific gravity of the urine is for the 24 hours. And how does the cryoscopy prove "that the kidneys, though diseased, were not the cause of the deterioration." In Case 8 we want an estimate of the urea, but with an albuminous urine having a specific gravity of 1006 the patient would surely in any event have been considered an unfit subject for operation. In Case 9, if, as it appears, the blood was tested after the operation, may not its abnormal condition have been brought about by the "lessened kidney elimination that follows operations ..... performed under an anæsthetic"? In Case 10, although the urea eliminated was low, the patient "was greatly wasted," so that without her bodyweight being stated the estimate loses its value as an indication of renal insufficiency, and why in this case is $\frac{1}{10}$° below normal "only" $\frac{1}{10}$° when in Case 2 $\frac{1}{10}$° was sufficient to indicate a probably fatal result after operation? In Case 11 criticism is impossible as facts as to tube casts and elimination of urea are not given. In Case 12 does cryoscopy—0·59°—indicate anything more than albuminous urine with specific gravity 1002 does?

Professor Ogston probably would not suggest that cryoscopy should take the place of the usual examination of the urine or blood, but that it should serve as an adjunct to these to increase the value of the deductions drawn from them; but as yet it seems to me the positions must be reversed, and careful chemical and microscopical examinations of the urine and blood be made to enable us to estimate the value and meaning of the variations in the freezing-point of the blood. Doubtless further observations will clear up many points, such as diurnal variation of the freezing-point and the meaning of readings above normal, and your readers will, I am sure, look forward with much interest to further developments in this promised aid to clinical diagnosis.

I am, Sirs, yours faithfully,

Bradford-on-Avon, Nov. 11th, 1901. CHAS. E. S. FLEMMING.

FOREIGN BODY IN THE RECTUM.

To the Editors of THE LANCET.

SIRS,—I have been asked, whether the retention of urine in my case was due to reflex action through the presence of the foreign body in the rectum. Certainly not. In the first place the old man possessed a blunted sensibility that would allow of the infliction of an unusual amount of pain without producing any reaction; furthermore, the bulk of the bottle, its position within the rectum and the pressure caused by the firmness with which it lodged on the coccyx, were sufficient reasons for retention of urine. I consider that the neck of the bottle impinging on the floor of the bladder paralysed the action of the vesical extrusive muscles and that the bottle was forced into this tight position by the frantic efforts made to recover it after it had escaped into the rectum.

I am, Sirs, yours faithfully,

Stockport, Nov. 12th, 1901. J. GOOD.

A QUESTION OF SPELLING.

To the Editors of THE LANCET.

SIRS,—I noticed that as in Sir William Gowers's case you substituted "faradaic" for "faradic" in a recent lecture of mine, and there is no doubt that you were correct, or more correct than I was, although it is certain that "faradic" will become the word *par excellence* in future on the ground of brevity and euphony, just as "telegram," in spite of all rules to the contrary, has superseded the less elegant "telegraph." After all, it is use and convenience that must guide us in such cases; as Horace has remarked,

"Usus
Quem penes arbitrium est et jus et norma loquendi."

I am, Sirs, yours faithfully,

C. BELL TAYLOR, M.D. Edin.

(Arbitrium est et jus et norma loquendi.)

*** It is correct to say "to telegraph" and "a telegram." "Telegraph" is the infinitive form of a Greek verb and "telegram" is the neuter noun form, derived from the past participle of that verb. "Telegraph" is used sometimes as a noun interchangeable with "telegram"—presumably on the analogy of the use of the word "photograph," but although

authority for this use can be found in the dictionary we do not consider it right.—ED. L.

A MEDICO-LEGAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—It is proposed to form a medico-legal society for the purpose of affording opportunities for discussing questions arising where medicine and law come into immediate contact. It is suggested that such a society should include all who are interested in the subject—lawyers as well as medical men—and that the discussions should embrace medico-legal questions of every description, both of everyday and of exceptional occurrence. Half a dozen meetings a year may be considered sufficient, and an annual subscription of half a guinea may be found to be enough to cover all expenses.

A meeting for the purpose of discussing the formation of the society will be held at 20, Hanover-square, W., on Thursday afternoon (5.30 o'clock), Dec. 5th. Those who are willing to assist, but unable to attend the meeting, will kindly communicate with Dr. McCallin, 20, Hanover-square.

We are, Sirs, yours faithfully,

F. J. SMITH.
W. MCCALLIN.

THE HARVEIAN LECTURES ON URINARY SURGERY: A CORRECTION.

To the Editors of THE LANCET.

SIRS,—In my first Harveian Lecture, which you were good enough to publish on Nov. 16th, I am made to say that the average stay in hospital of Dr. D. F. Keegan's adult Indian lithotrity cases "was only 53 days." I really said *5·3 days*. This is important, as one of the points of my argument was the short stay in hospital necessary for Indian patients.

I am, Sirs, yours faithfully,

G. BUCKSTON BROWNE.

Wimpole-street, W., Nov. 18th, 1901.

*** We publish this letter with pleasure, but the context should surely prevent the reader from falling into error. It will also be seen by anyone looking closely at the figures as we printed them that the decimal point was properly inserted but failed to "print," only a gap indicating the place where it should have appeared.—ED. L.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Continued High Mortality from Plague.—Sanitary Reforms in Calcutta.—Government Report on the Recent Hackney Carriage Drivers' Strike in Calcutta.

THE total mortality from plague throughout India continues at between 8000 and 9000 deaths a week. In the Bombay Presidency there were 7199 deaths last week. The disease is spreading in the Punjab and the deaths are almost daily increasing in Bangalore and Poona. Bombay continues about the same, and elsewhere throughout India little change is recorded. For the present the epidemic is raging in the Satara, Belgaum, and Dharwar districts, and in parts of the Southern Mahratta country and the Kolhapur State.

A great change is contemplated in the health department in Calcutta. The city is to be divided into four districts, and the conservancy is to be placed under the engineer. Each district will have its health officer with a staff of sanitary inspectors, and will work to a large extent independently. The engineering department is to be divided up in the same way, and there is to be a separate building department. Each district will have, roughly, 200,000 inhabitants. Great activity is going on with regard to the improvement of insanitary *bustees* and notices have been served on a large number of owners to improve them according to standard plans. There is a chance of the main drainage being extended to the suburban districts and of the inauguration of a continuous water-supply. The waste of water at the present time is enormous and millions of gallons simply soak into the soil. Larger schemes of improvement are also talked about, and it is said that 15 miles of new and wide streets are to be carried through the town. A commencement has already been made with model dwellings for the poor, but it is very doubtful whether they will be generally successful. A recent resolution of the Bengal Government indicates great changes in the plague department. The corporation are not to get any more money on this account, and the Commissioners are recommended to arrange for plague expenses in the same way as they do for cholera and small-pox. The long and short of this is that plague will have to be dealt with by the health department and that the separate establishment will be abolished.

The recent strike of public conveyance drivers was partly brought about through the employés of the Society for the Prevention of Cruelty to Animals. Not that they were too active in instituting proceedings for cruelty, but blackmailing on a large scale has been proved to have been carried out. The police have also been shown to have largely practised this abuse, so that between the two the hackney-carriage owner has had a troublesome time. The amount of cruelty done to animals is great, and if the society employed honest men for the work there would be plenty for them to do. Unfortunately, the magistrates have not supported the society's prosecutions, so that the small fines inflicted have not proved deterrent. Active measures have been taken both with the police force and with the society's men, so that it is to be hoped a better time is coming. The Belgacina Veterinary Hospital is used as an infirmary for the treatment of the animals in respect of which offences against the Act have been committed. The honorary magistrates have ignored the law and they never send cases to Belgacina. With reference to comparative pathology there is a great want for a central recognised museum. There is abundant material but it is at present nearly all wasted. The medical colleges do not attract it, the India Museum has only a few specimens, and the Zoological Gardens are unprovided with accommodation. The bulls, buffaloes, and other cattle, besides horses and elephants, which are used for draught purposes, not to speak of the multiplicity of animals, both domestic and wild, which could be utilised for investigation, offer an immense field for scientific research.

Oct. 31st.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Victoria University.

A MEETING of the Court of the Victoria University was held at Owens College on Nov. 14th, when the following modification of the statutes regarding the M.D. degree was passed:—

That statute v. 22 (Cal., p. 95) shall run as follows: "Candidates for the degree of Doctor of Medicine are required to present a dissertation, embodying the results of personal observations or original research, either in some department of medicine or of some science directly relative to medicine; provided always that original work, published in scientific journals or in the proceedings of learned societies, or separately, shall be admissible in lieu of, or in addition to, a dissertation specially written for the degree. No candidate will be admitted to the degree unless his application, after report from the Departmental Board of Medicine and Surgery, shall have been recommended by the General Board of Studies to the Council for acceptance. Candidates may be required to undergo examination in any subject connected with the dissertation or other work submitted."

As a consequence of the adoption of the resolution the following regulation will be added (Cal., p. 157):—

Candidates for the degree of Doctor of Medicine are required to furnish three copies, preferably printed or type-written, of the dissertation or published work which they desire to submit to the University, together with any drawings or specimens which may be necessary for illustration. These copies shall be sent in to the Registrar not later than March 1st in the year of application. They will be retained by the University.

Education of Medical Students.

At the same meeting Professor Sheridan Delépine moved:—

That having regard to the action taken by the Conjoint Examining Boards of the Royal Colleges of Physicians and Surgeons of London with reference to preliminary examinations and the registration of medical students, the Council be requested to consider what steps, if any, shall be taken on behalf of the University in this matter and to take such action as seems desirable.

In 1898 the Conjoint Board accepted the time spent in grammar schools in studying chemistry, physics, or biology as part of the five years' medical curriculum. In June, 1899, the Education Committee of the General Medical Council reported that they did not regard such schools as institutions

at which the first of the five years of medical study should be spent. In December of the same year the authority of the General Medical Council as to this matter was challenged by the Conjoint Board. In June of this year, 1901, regulations were brought forward on behalf of the latter, dispensing with students' registration, and it was found that the General Medical Council could not enforce their registration at the time of the preliminary education. It therefore followed that the first official record of a medical student's career was the passing of the first professional examination, so that the medical curriculum was reduced from five years to four by the exclusion of those subjects. The report of the Education Committee on a new registration scheme would probably be considered by the General Medical Council at its next meeting on Nov. 26th. In this scheme the preliminary education qualifying for registration would be extended and would consist (1) of preliminary examination as at present, and (2) of examination in physics, chemistry, and biology. The compulsory medical curriculum would be reduced to four years, and the study of chemistry, physics, and biology in university colleges and schools of the same status would be rendered optional. This would tend to lengthen the school period and to shorten the university career. If the Conjoint Board alone were to adopt this system and the universities enforced the present curriculum many pupils who would otherwise prepare for university degrees would be advised to follow the easier course of preparing for the Conjoint Board diplomas. As both alternatives would probably be injurious to the interests of universities and to university education generally, if the matter were considered sufficiently urgent a committee should be appointed to consider the matter carefully and see if the university alone or jointly with other universities could take some useful steps at the present juncture. Professor R. B. Wild seconded the motion.

Friendly Societies' Convalescent Home.

An effort is being made by the council of the Manchester and Salford United Friendly Societies to establish a self-supporting convalescent home for the benefit of their members in Manchester and the district. One of the speakers instanced the convalescent home at Clent, belonging to the Ancient Order of Foresters, maintained by the contributions of nearly 30,000 Foresters, each of whom by contributing 6*d.* a year was entitled to a fortnight's free maintenance at the home. There seems a probability of the scheme being taken up and carried out. It is proposed to have three acres of ground in the country and a building to hold 36 beds in separate rooms, at a cost of £5000.

Brandlehow, Derwentwater.

Widespread interest has been taken in the effort, now happily successful, for preserving the Brandlehow Park estate from becoming the prey of the speculative builder, and the nation, as well as the National Trust for Places of Historic or Natural Beauty, may be congratulated on its rescue. The final meeting of the Manchester committee in aid of this object took place on Oct. 30th, when it was stated that the contributions from the city and district amounted to a little over £796. It was decided not to dissolve the committee in case its help should be wanted for any other effort.

Arsenic in Beer.

Two cases which have occurred recently show that the arsenical-beer epoch has not quite departed. An inquest was held on Nov. 13th on the body of a man who died in Rusholme on the 9th. His illness dated from this time last year. A verdict was returned of "Death from peripheral neuritis caused by arsenical poisoning." In the other case, one of long-continued illness, a man obtained £50 damages. It was tried at great length before Mr. Justice Wills, who, not knowing how Lancashire people can drink, asked the counsel if he were astonished at the man being ill when he drank from four to six pints of beer each day. The counsel said: "If your lordship knew the amount that is taken in Lancashire I do not think you would think that was an excessive amount compared with what is taken without ill-effects." The counsel must have strong views as to the innocence of beer. In summing up the judge said he had reckoned that the plaintiff drank about 2552 pints of beer in the year, or over 25 gallons a month. The jury found "that plaintiff's illness was due to arsenical poisoning, contributed to by excessive drinking."

Macclesfield General Infirmary.

At a meeting of the governors of the Macclesfield General Infirmary held on Nov. 11th the six honorary medical men gave in their resignations. Six months ago the governors appointed a lady as junior house surgeon against the wishes of the honorary medical staff. She resigned the appointment a month since and the vacancy was advertised in the usual way. It would seem that the position is not attractive, as there were only two lady applicants and one gentlemen, the latter withdrawing his application before the election. One of the ladies was appointed and Dr. C. Averill, the senior member of the staff, then handed in a document signed by the whole of the staff resigning their positions. The governors met on the 18th to consider the resignations. Mr. Mair, the chairman, had written to Dr. Averill asking him to be present, but the latter declined, saying, however, that the whole of the staff were willing to meet the governors in conference if they should be asked to do so. It was carried unanimously that the consideration of the resignations should be postponed and that a conference should be held, the time for which is fixed for the 25th. Medical men have in many cases not yet shaken off sufficient of their modesty to enable them to feel comfortable in dealing with a certain proportion of male diseases in association with lady doctors. But if the ladies are legally qualified the necessity for such association may in time break down these barriers.

The Election to the General Medical Council.

There is considerable interest felt in the profession in the Manchester district, as in others, in the candidature for Direct Representatives on the General Medical Council. The point about which there seems to be the strongest feeling is that of the position of midwives. Are they to be obstetric nurses under the direction of qualified practitioners of medicine? or are they to become an inferior grade of legally qualified practitioners—legally qualified, but of inferior general education and with special training and instruction too limited to make it desirable to entrust to them the lives of the majority of poor parturient women? Apart from the competition with the medical men practising in poor districts the latter alternative does not seem to promise the greatest security to those whose lives are involved.

Nov. 19th.

WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

King Edward and the Workmen's Institute.

ONE of the most noticeable, as it is one of the most pleasing, features of the Welsh colliery villages is the workmen's institute, in which there is usually to be found a reading-room, a lending library, a smoking-room, a billiard-room, and rooms for technical classes. In many instances they have been established since the introduction of free education, for when school fees were payable many schools were supported by the deduction of a small weekly sum from the wages of the colliers, and upon the abolition of school fees the deductions were continued, but to support a workmen's institute. The actual buildings have in some districts been erected by the colliery proprietors and in others by the subscriptions of the men and others in the locality. This latter course is being adopted at Nantymoel, near Bridgend, where a building to cost £4000 is projected, and towards this sum His Majesty King Edward, who as the Duke of Lancaster is the ground landlord, has contributed £200, an example which might very well be followed by other ground landlords, as it is the exception rather than the rule for the royalty-receivers to take any interest in the districts from which many of them derive enormous incomes.

Fatal Accident to a Medical Practitioner.

While making his professional visits on Nov. 12th Mr. George Henry Browne of Brynmawr was thrown from his gig; his head struck against the portico of an hotel, and though he was able to walk into the house he very shortly died. The evidence at the inquest which was subsequently held disclosed the fact that there was no fracture and that death was probably due to shock. Mrs. Browne, who was in the carriage with her husband, was thrown out, but beyond a severe shaking she received no injury. Mr. Browne, who was only 45

years of age at the time of his death, was a student at the Ledwich School, Dublin, and had practised in Brynmawr for over 20 years, during which the whole of which period he had held the position of medical officer of health, and for the greater portion of the time he was Poor-law medical officer to the Crickhowell and Bedwellty unions, surgeon to the Brynmawr collieries, and joint surgeon to the Ebbw Vale ironworks. He was on the commission of the peace for Brecknockshire and took a great interest in the social welfare and in the surroundings of the people among whom his daily work lay.

Milk-borne Typhoid Fever.

An outbreak of typhoid fever was reported to the Pontypridd Urban District Council on Nov. 12th by the medical officer of health (Mr. Howard Davies), who stated that the milk-supply to all the infected dwellings came from the same dairy and that the milk-cans and vessels from the dairy were cleansed with water from a public well within a few feet of which sewage discharged into an open ditch. Mr. Davies recommended that the sale of milk from this dairy should be prohibited, but his recommendation was not adopted, the half measure being deemed sufficient of permitting the milk-seller to continue the distribution of milk upon his promising not to use the water in question.

The late Mr. Evan Lloyd, M.R.C.S. Eng., L.S.A.

Through the death of Mr. Evan Lloyd, on Nov. 15th, at Ammanford, at the age of 62 years, Carmarthenshire loses one of the oldest and best known medical practitioners in the county. Mr. Lloyd was a member of an old Carmarthenshire family and practised until recently at Ammanford within a short distance of his birthplace at Garnant. He received his medical training at St. Bartholomew's Hospital and was surgeon to the Ammanford collieries and Poor-law medical officer to the Llandilofawr Union.

The Gift of Isolation Hospitals.

Although large sums of money are handed over every year by philanthropic persons for the support of hospitals, both general and special, very little is given either for the erection or for the upkeep of isolation hospitals, yet there are many districts where the expenditure of comparatively small sums would provide for the establishment of a hospital which would be of the greatest service to the inhabitants, but which the sanitary authority cannot be prevailed upon to erect. Miss Talbot has set an example which might well be followed. She gave to the Margam Urban District Council a site upon which to build a hospital and she has lent to the council, free of interest, a sufficient sum of money to pay for the erection of suitable buildings, the loan to be repaid in 30 equal annual instalments. To the town of Monmouth Lord Llangattock has been equally liberal. He purchased for £300 a quarter of an acre of land upon which were standing four back-to-back cottages. Nearly the whole of the inside of these cottages was taken out and other alterations were made, at a cost of £400, which has resulted in a very serviceable hospital with accommodation in three wards nominally for three patients, but six might safely be treated at one time. There are also kitchens, nurses' sitting-rooms and bedrooms, a bathroom, a washhouse, and a mortuary. The Monmouth Corporation bore the cost of furnishing—about £50—and the remaining £700 were paid by Lord Llangattock. The population of Monmouth is less than 6000.

A Brave Medical Man.

Mr. Edward Sandom Stone Davis, M.R.C.S. Eng., L.S.A., and Mr. W. Tamblyn, who on August 19th, 1901, at Par, Cornwall, rescued two young St. Blazey tradesmen from drowning, have been awarded certificates on vellum by the Royal Humane Society. The certificates were presented on Nov. 14th at a largely-attended meeting in St. Blazey Town Hall by Major J. Polkinghorne, who alluded to the fact that Mr. Davis had on two previous occasions been instrumental in saving persons from drowning.

Nov. 19th.

LITERARY INTELLIGENCE. — The Christmas Number of the *Wide World Magazine* contains an illustrated article on "Life in a Refugee Camp," by Dr. Herbert Crook, medical officer of the Johannesburg Camp.—Messrs. Baillière, Tindall, and Cox have taken over the publication of Dr. Archdall Reid's work on the Alcohol Question from Mr. Fisher Unwin.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow University.

THE November meeting of the University Court was held on Nov. 14th, the Very Rev. Principal Story being in the chair. The accounts for the year showed a surplus of £681, due mainly to an increase in the fees received, but in part to lessened expenditure in certain directions. Dr. McVail criticised the omission from the financial statement of the funds dealing with bursaries and money prizes, which, being University moneys, ought, he considered, to appear in the general accounts. To this it was replied that the funds in question had always been kept apart from the revenues appropriated to teaching purposes. Ultimately, on the suggestion of the Lord Provost, it was agreed to insert in the general accounts a note calling attention to the funds to which Dr. McVail had referred. The Principal, Professor Young, Dr. McVail, and Sir John Neilson Cuthbertson were appointed curators to the chair of pathology. A representation from the General Council in favour of curtailing the present courses of systematic lectures in the medical curriculum and proposing the further development of practical classes was referred to a special committee. There was no other business of general interest.—The first meeting of the University Engineering Society was held on Nov. 15th when Professor Gray delivered his presidential address on the Study of Physics and Engineering.—A second course of lectures on Celtic is to be continued during the present session by Dr. Magnus Maclean. The subject of the opening lecture, which is announced for Nov. 26th, is to be the Arrival of the Gael in History and Literature.

The Plague in Glasgow.

All fear of any immediate extension of the outbreak of plague has now practically subsided. There have been no new cases during the last three weeks and the Central Station Hotel, where the original patients were employed, has been thoroughly disinfected and is to be reopened for business to-morrow (Nov. 20th). The Local Government Board of Scotland has intimated approval of the order of the local authority making plague a notifiable disease within the city until Dec. 31st, 1902. Dr. A. K. Chalmers has issued a circular dealing with the relationship of ships entering and leaving the port, and with the conditions which they must adopt in order to avoid prolonged detention in quarantine. He advises that continuous efforts should be made to destroy rats on board ships, and advises for this purpose sulphur fumigation when the holds are empty. The sanitary authorities are willing to undertake this process as well as medically to inspect the officers, crew, and passengers of all out-going vessels, and to certify accordingly.

Glasgow Hospitals.

The staffs of the three general hospitals in Glasgow have recently been considering the advisability of attempting to secure representation on the several boards of management. At present there is no such representation, and indeed it is either a written or an unwritten law that no member of a general hospital staff can be elected to the supreme managing authority. This position has obvious disadvantages, and on several occasions personal efforts have been made to procure its alteration. The present movement is somewhat more widely organised and may thus more reasonably hope for success. The answer which has hitherto been made to the attempts at reform is that the interests of the medical staff are adequately represented by members of the profession elected to the board of management by such constituent bodies as the University, the town council, and the Faculty of Physicians and Surgeons. It is apparently forgotten that these bodies are not compelled to elect members of the profession, that the representatives whom they do elect have not always, or indeed usually, had hospital experience, and that in any case they have no authority or title to represent the wishes of the staff. Whether members of the staff should actually sit on the board of management may be a question, but the present attempt to constitute the staff of each hospital an advisory committee to which all important matters dealing with the medical interests of the respective institutions shall be referred must command the general sympathy of the profession. It is the only way by which the managers can learn the actual opinions of the staff as distinct

from the ambitions of individual members, and without it the efficient guidance of the board on medical and surgical questions is scarcely possible. The organisers of the present movement appear to be making a mistake in proposing to add to the advisory staff committee members of the general board elected by various corporate bodies who may happen to be medical men. What is wanted is the voice of those who are actually engaged in the practical working of the hospital. It is the staff alone which can supply this, and the introduction into the staff committee of medical men not specially competent to deal with hospital affairs can tend only to produce confusion. Further, the position of these gentlemen on the general board would not be strengthened by such an arrangement. They are sent there to represent general public interests, and to put them in a position in which they would appear as representatives of the staff might lessen their influence on general current affairs as well as give to them a character not in harmony with their real responsibilities.

Curious Epidemic in Partick, Glasgow.

The medical officer of Partick, Dr. G. Arbuckle Brown, has just issued a special report dealing with a curious epidemic outbreak which occurred early in October last. The number of persons affected he estimates at from 400 to 500, and the symptoms observed were violent vomiting, diarrhœa, and in many cases also marked prostration. It was found that without exception the persons affected obtained their milk-supply from one and the same dairy. Further investigation traced the distributed milk to a certain farm in Renfrewshire. Here, however, the sanitary conditions and the water-supply were above suspicion, and no case of illness existed or had recently existed among the farm servants. The only unusual event to be discovered was an acute and somewhat mysterious disease which had attacked one of the cows and had terminated fatally within 48 hours. Unfortunately, the carcass had been destroyed, so that it was impossible to discover the nature of the affection. Subsequently arrangements were made for pasteurising all milk received by the dairyman, and in the course of a few days the epidemic outbreak entirely ceased. Neither chemical nor bacteriological examination of the suspected milk threw any light on the question. Dr. Brown concludes that the illness of the cow, whatever may have been its nature, must be held responsible for the symptoms produced.

Dr. Thomas Lapraik has been appointed chairman of the Glasgow Athenæum.

Nov. 19th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Irish University Education.

THE blue-book containing the minutes of evidence of the first session (nine days) of the Royal Commission on University Education in Ireland, with documents referred to in the minutes of evidence, was published last week and in a short time the whole of the available edition was exhausted. Further copies are being got ready. As this is simply the appendix to the first report, and as it deals solely with evidence taken in Dublin it would be premature to draw any conclusions at present. However, although there may be differences on minor points, running all through the evidence I see two solutions suggested for the vexed question of Irish university education: one, the establishment of a university for Catholics in Dublin and the conversion of Queen's College, Belfast, into a university; the second solution being an endowed college for Catholics in connexion with a reconstructed Royal University. A great amount of argument was tendered in support of both of these views, but until the commission is in possession of further information—and it is stated that it will not meet in Belfast or Cork until about Easter—it would be altogether premature to attempt to gauge what will be its recommendations.

Army Medical Reform: Advisory Board.

Dr. Charles Bent Ball has been selected as civilian member for Ireland on the Advisory Board for the supervision of the Army Medical Services.

The Hospitals Question in Belfast.

A special meeting of the City Corporation of Belfast was held on Nov. 18th, in response to a requisition signed by the Roman Catholic Association members, to seek power, in the new "omnibus" Bill about to be promoted by the Belfast City Council, to make a grant from the public funds to the Mater Infirmorum Hospital, in view of the fact that the draft Bill contains a clause giving an additional six acres of ground to the Royal Victoria Hospital. It would appear that £5000 were paid for the site of the Mater Infirmorum Hospital, apart from a ground-rent of £100 a year. The argument of the Roman Catholic members was that the land granted to the Royal Victoria Hospital represented a certain money-value, and they demanded an equivalent for their hospital, the Mater Infirmorum. Those who objected to make any grant to the Mater Infirmorum Hospital did so on the following grounds:—1. That the six acres originally given to the Royal Victoria Hospital (and the present additional six acres proposed to be given, which are merely a corollary of that gift to provide a proper and efficient site) were really granted by the citizens of Belfast with the approval of the corporation to commemorate the jubilee of Queen Victoria. 2. That the constitution of the Royal Victoria Hospital is entirely non-sectarian; on its committee there are Roman Catholic members, while on the committee of the Mater Infirmorum Hospital there was not a single Protestant member. To say that patients, irrespectively of their religious belief, are taken into the Mater Infirmorum Hospital is no reply to the well-known fact that that institution is controlled for their own specific purposes (and to do this they have a perfect right) by the authorities of the Roman Catholic Church. A Methodist member of the corporation said that if the city council agreed to give a grant to a Roman Catholic hospital as proposed that day the next thing would be to bring forward a motion demanding aid for a Methodist hospital out of the ratepayers' money. One of the Roman Catholic members of the corporation was so bold as to speak of the sectarianism that existed in Belfast, which he characterised as the bane of public life and the disgrace to the city, and he contrasted the generous action of the Dublin corporation which actually contributed to the Adelaide Hospital which was run on Protestant lines. In reply, Sir James Henderson, D.L. (ex-mayor of Belfast), read a letter from a correspondent in Dublin to the effect that "the Adelaide Hospital, which is under exclusively Protestant management, and is supported altogether by voluntary contributions, gets no grant because it is so distinctly a Protestant institution." 3. To make a grant by the corporation to the Roman Catholic Mater Infirmorum Hospital would be to establish a precedent which would oblige the city council to consider the claims of such deserving charities as the Children's Hospitals (two), the Samaritan Hospital, the Eye Hospitals (two), and the Maternity Hospital. The corporation decided by a vote of 23 to 7 (the latter being all Roman Catholics) to draw the line at the hospital which is not connected with or controlled by any Church, but by and for the whole community. In this action they have shown a truly non-sectarian attitude which Dublin might well copy. Everyone in Belfast admires the pluck and enterprise shown by the Roman Catholics in building and equipping their new hospital, and many Protestants have subscribed to its funds, but it is to be feared that the action of the Roman Catholic party in regard to the Royal Victoria Hospital will greatly destroy this good feeling.

Severe Storm in Ulster.

On Nov. 12th the most severe storm which has been experienced since that of 1894, which did so much damage, swept over Ulster. It was accompanied by a very heavy downpour of rain, and the wind, blowing from the north-east, drove the tide up Belfast Lough, so that at the harbour the water was on the level with the quays. As a result of this unusually high tide and the tremendous downpour of rain (over two inches fell in 24 hours) many parts of Belfast were flooded and enormous damage was done to property. It is quite evident that the main drainage system of Belfast is totally unfit to cope with a combination of a high tide and a great rainfall. When this occurs there is always flooding, and great injury is done to the low-lying portions of the city.

Death of Mr. O. J. Forde, Treasurer of the Cork North Infirmary.

Many past students of the Cork North Infirmary will hear with regret of the death of Mr. O. J. Forde, who for many years was closely identified with the administration of that institution. As honorary treasurer he took an intense interest in its welfare. He was always most courteous to the

medical and surgical staffs of the hospital and any improvements or reforms suggested by them had his energetic support. Possessed of great business capacity and tact he looked after the finances in a manner that procured for him on several occasions the warm thanks of the board of governors. Some few years ago failing health compelled him to resign his position, but at the urgent entreaty of his colleagues he consented to retain his seat on the board. Even then he did not cease to take a deep interest in the affairs of the hospital and he was often present at meetings when it was obvious to all that he should have been resting in his own home. He was one of those men who do good by stealth. Of a retiring disposition, he hated display of any kind, and as his intimate friends fully anticipated, gave explicit instructions that his funeral should be private. That decision was much regretted by the great body of his fellow-citizens who were anxious to pay a well-earned tribute of respect to his memory.

Cork Hospital Saturday Collection.

The Cork Hospital Saturday Fund has been distributed. One of the honorary secretaries in his report states that last year they were assisted by collections made in two or three of the country towns, but this year a new association was started called the "Hospital Aid Society" and they received through that society for distribution £696, which sum added to £443 collected in the city made a total of £1139. The funds so obtained were distributed as follows:—

	£	s.	d.		£	s.	d.
North Infirmary	195	0	0	St. Vincent's Hospital	105	0	0
South Infirmary	195	0	0	Lying-in Hospital ...	100	0	0
Mercy Hospital	135	0	0	Fever Hospital	70	0	0
Women and Children's Hospital	125	0	0	Maternity	35	0	0
Eye, Ear, and Throat Hospital	115	0	0	St. Patrick's Cancer and Incurable Hospital ...	20	0	0
				Queenstown Hospital	10	0	0

Nov. 19th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Sensations of an "Electrocuted" Professor.

M. ANDRÉ BROCA, *agrégé* Professor of Physics, was recently experimenting with a Rhumkorff coil and received a shock with a powerful current. The sensations which he experienced are particularly interesting at the present time, the recent execution of Czolgosz having drawn special attention to the effect of severe electric shock. M. Broca had in each hand a very large electrode, to which circumstance he owed his escape from burns. He was thrown violently to the ground, had a sensation as of his heart ceasing to beat, and quite gave himself up for lost. He tried to call his assistant to switch off the current but could only make an inarticulate noise. He lay at full length on the floor and felt no sensation in his hands or arms, while the walls of the room appeared of a green colour and as if they were leaning over to the right. When the assistant had cut off the current he went to M. Broca and raised him up. M. Broca was able to walk slowly but felt as if he possessed only a head and two legs; he tried to move his arms but they were paralysed. When they were sharply pinched he felt nothing, but, on the contrary, his fingers were hyperæsthetic—for instance, on touching a piece of metal he felt a sensation of extreme cold. About a quarter of an hour later he could move his fingers and was able to write very slowly. On trying to walk he at once became short of breath. When he got home, however, he was able to walk slowly up five flights of stairs. Some hours later he had violent cardiac palpitation, but after two days he felt perfectly well. It is noteworthy that after receiving the shock M. Broca retained perfect consciousnes and said to himself that he was dying.

Serum Therapeutics in Typhoid Fever.

Paris is suffering at the present time in many districts from an invasion of typhoid fever, but the disease is on the decline, for very few fresh cases are reported. One of the nurses at the Tenon Hospital is seriously ill from the fever, while a nurse and a house surgeon from other hospitals have been admitted to the Tenon Hospital, and there are 32 cases of typhoid fever there. Dr. Chantemesse is treating them by inoculation with a new serum which he has just discovered and of which he gave an account at the meeting of the Hospitals Medical Society held on Nov. 8th. Since 1892 Dr. Chantemesse and M. Widal have been trying the effect in typhoid fever of a serum prepared from the bodies of bacilli, but this proved to be only preventive and not curative. Lately much more has been discovered as to the nature of the typhoid toxin and the two observers have been able to prepare an anti-typhoid serum from the typhoid toxin and not from the bacilli themselves. This is the serum which Dr. Chantemesse described to the society. He reminded his hearers that the mortality from typhoid fever varied in different epidemics and in different places. In the hospital at which he attended he had treated 34 cases of typhoid fever and every patient recovered. In other hospitals, according to official statistics of the same epidemic, the mortality was over 25 per cent. In the Tenon Hospital he had treated 30 cases of severe typhoid fever, there being four deaths, while the mortality in other cases of the same disease in the same hospital during the same epidemic reached 31·8 per cent. In the great majority of cases injection of the serum was followed in a short time by a fall of temperature, after which the patient went on to recovery, provided that the injection had been made before the eighth day of disease. If the injection were made later than the eighth day the temperature fell, but more slowly, and after a few days it reached its original height, when to obtain a permanent reduction another injection was necessary. These observations exhibited various differences according to the severity of the case and the degree of resistance which the patients possessed. The injection did not prevent relapses, therefore it was necessary to watch the patient carefully and to be ready with another injection in case he were to relapse. The effects of the injection were very marked: the pulse became less frequent in a few hours and, after one, two, or three days, diarrhœa ceased, the blood-pressure rose, and the patient passed a large quantity of urine. The use of the serum did not interdict cold baths and plenty of liquid food, but no other form of medication should be used. Dr. Chantemesse made his injection under the skin of the arm in doses of 15 cubic centimetres, and the earlier it was used the better the result. An injection should be given on the first suspicion of typhoid fever, without waiting for serum diagnosis. In cases which came under treatment early recovery was certain. M. Le Gendre stated that he had had under his care a case of typhoid fever in a tuberculous patient who absolutely refused cold baths. Dr. Chantemesse injected the patient on the seventh day and he rapidly recovered. In several other instances M. Le Gendre had seen the serum to be efficacious and its use to be unattended by any inconvenience. M. Duflocq also bore witness to the good effect of the serum.

The New Dean of the Faculty of Medicine.

M. Brouardel having persisted in his refusal to stand again for the post of dean and having reached the end of his term of office the election of a new dean was held on Nov. 14th. At the first ballot no candidate obtained the requisite majority and M. Debove withdrew his candidature. The votes being divided among the other candidates M. Pinard came out at the head, but still did not obtain a sufficient majority. A number of M. Debove's colleagues then insisted upon his standing again and he was elected by 48 votes. The new dean was born in Paris in 1845. In 1869 he was *interne*, in 1877 physician to the hospitals, and *agrégé* in 1878. In 1890 he became a professor of the faculty and in 1892 a member of the Academy of Medicine. In 1890 he became a member of the council of the university and assessor to the dean. He is an officer of the Legion of Honour, an old pupil of Charcot, and holds the chair of clinical medicine. He is physician to the Beaujon Hospital and takes a special interest in diseases of the lungs and of the digestive system.

Nov. 19th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

A New Malarial Problem.

NOTWITHSTANDING all the recent advances in our knowledge of the etiology of malaria it would seem that there remain more than one problem in regard to it, a satisfactory solution of which has still to be found. It has been asserted, for example, that malarious localities exist where the mosquito cannot become infected from the human subject because they are destitute of human inhabitants, but

where, nevertheless, fever may readily be contracted by the passing traveller. This statement has never been tested in a scientific way and is a difficult one either to prove or to disprove. It is most likely founded on an imperfect knowledge of the localities concerned, as has so often happened in regard to other statements that appear to negative the mosquito theory of infection. But how can we interpret the facts lately noted by Celli and Gasperini in a communication to the *Policlinico*, entitled, "Paludismo senza Malaria"?[1] These observers, examining certain localities in Tuscany—namely, the swamps of Fucecchio and Bientina, the Lago di Massaciuccoli and marshes surrounding it, and the Tuscan littoral from Collesalvetti and Leghorn to Viareggio and Pietrasanta—find a condition of affairs of which it is very hard to offer any satisfactory explanation. These localities were in former times highly malarious, a fact testified to by the old Austrian military maps compiled in the grand ducal times, on which they are indicated as "regions where intermittent fevers prevail," as well as by the older local medical men who remember the prevalence of malaria in them as lately as from 25 to 30 years ago. Since that time a progressive salutary change with respect to malaria has taken place, although the physical conditions remain precisely the same as before. For example, the marshes of Fucecchio and Bientina are still deserted swamps in the midst of an agricultural oasis; in the other districts there exist canals of stagnant water precisely like those of the neighbouring fever-stricken Maremma; at Massarossa there are large rice-fields like those of Lombardy, with macerating tanks for hemp; while in the marshes between Bientina and Orentano peat-mosses abound and the cutting of peats goes on regularly. All the conditions, therefore, obtain in these localities which in other places give rise to fevers and tend to enhance their numbers and their deadliness. In all of them the stagnant water swarms with larvæ of anopheles (claviger and pictus) and myriads of the adult insects, in no respect distinguishable in their specific characters from the same varieties in malarious localities, inhabit the stables and dwelling-houses, causing great annoyance to their inhabitants; and finally, there is no want of malarial subjects by whom the mosquitoes might be infected, for many of the inhabitants of these Tuscan marshes go to Algeria, Corsica, Sardinia, the Maremma of Grossets, and the Campagna of Rome in search of work and there contract malaria, of which they have the usual more or less obstinately recurring relapses after their return home. There is therefore plenty of parasitic blood obtainable by the anopheles during the summer and autumn months and all the conditions necessary for an extensive epidemic of malaria are thus apparently provided in abundance. In another locality such an outbreak would be inevitable, but in this favoured region no such result follows. The children, who are elsewhere the surest indicators of malaria, are here robust and rosy, although born and bred in the midst of these marshes; the adult population may be unhealthy and squalid from the effects of pellagra, but show no traces of malaria, and it is not uncommon to find persons far advanced in years who have lived all their lives in these marshes without ever having suffered from fever. In the neighbourhood of Massaciuccoli there is a colony of women and children who watch night and day over the tomato crops and are lodged in huts giving no better protection than do those of the Roman Campagna and Pontine Marshes, but who nevertheless remain quite immune. In other places careful inquiry either failed to reveal any cases of fever, or if such occurred they were very few and mild, and had given rise to no fresh cases amongst the relatives or neighbours. Only two circumscribed foci of malaria were found in the whole of this extensive paludal zone. One of these was situated near Cava between Vecchiano and the Lago di Massaciuccoli, where a relapsing case was encountered in a house inhabited by a family in which a case or two of fever occurs every year, while the numerous families in some houses quite near at hand all remained healthy. Another focus was met with on the edge of the marsh of Fucecchio, but here, too, there occur only about 30 cases a year amongst some 3000 persons. The immunity enjoyed by nearly the whole population of these Tuscan marshes cannot depend on any peculiarity of the meteorological conditions since in the small province of Pisa these are practically the same in the part towards Rome where grave forms of malaria prevail as in the other part, only a short distance off, which is quite healthy. Nor can it be explained by any inherent powers of resistance in the inhabitants, who on going to work in malarious localities readily contract the fever; nor by any want of susceptibility of the anopheles, which were readily infected by malarious blood on being brought to Rome; nor by the use of quinine, which is not more employed here than in other places. It is therefore evident that we have here to deal with an indisputable and so far inexplicable exception to the working of the new theory of the etiology and epidemiology of malaria. Celli and Gasparini regard it as the exception which confirms the rule, and point out that it is not unusual to observe, even in such typically contagious maladies as plague and leprosy, a gradual reduction in the number of cases and an attenuation in their infective power to such a degree that the possibility of contagion finally disappears. Elsewhere—as in France, Germany, and England—this happy stage in the history of malaria has been reached, the anopheles which still remain where there is no longer any malaria being probably the documentary evidence, as it were, of its former existence. The same consummation may be nearer in Italy than we think for, hastened, as it must surely be, by the elaborate preventive measures now so extensively adopted throughout the whole country. Perhaps the further study of any peculiar conditions existing in the Tuscan marshes may afford useful indications for attacking the problem of the prophylaxis of malaria from some new and still more promising direction.

[1] Policlinico, Sezione pratica, Fasc. 42, August 17th, 1901.

Obituary: Emilio De Rossi.

By the death of Professor Emilio De Rossi, which occurred suddenly from angina pectoris on Nov. 11th, Italy loses the foremost as well as the first of her aural surgeons. Born at Mentone in 1844, he graduated at the age of 20 years at Genoa, whence he went to Paris with the intention of studying ophthalmology. While there he transferred his attention to the study of the ear, devoting himself to it so successfully that in 1871 a chair of Otoiatry, which he has occupied ever since, was founded expressly for him in the University of Rome. In 1866 he published his "Trattato sulle Malattie dell' Orecchio" which is regarded in Italy as a classical work. Besides numerous contributions to otoiatry he published various papers on nasal and laryngeal subjects, in which he was likewise a recognised authority. For over 20 years he published regularly his valuable *Rendiconti Statistico-clinici*, and in 1893 he founded, in conjunction with Professor Gradenigo of Turin, the well-known *Archivio Italiano di Otoiatria*. He was a bold and skilful operator, and is responsible for several advances in operative procedures in connexion with his speciality, notably the disarticulation of the incus from the stapes (first performed by him in 1898), and for different new plastic and grafting operations. He demonstrated the value of electrolysis in the treatment of naso-pharyngeal polypus and was the inventor of various ingenious instruments for the removal of laryngeal tumours. His loss at the comparatively early age of 57 years is much regretted, especially in Rome, where he was esteemed not only for his professional skill but also for his personal qualities and for his kindness to the poor.

Nov. 17th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Precautions against Bubonic Plague.

DR. MONTIZAMBERT, the Director-General of Public Health, owing to the outbreak of bubonic plague at Glasgow has issued an official letter to all steamship companies which requires that all medical officers of vessels shall prepare a statement of the temperature of every person on board 24 hours prior to arrival at any Canadian port. This will insure that the ship's surgeon is brought into contact with every one on board, and cases of disease indicated by a rising temperature will thus be detected. Additional instructions have also been issued to all quarantine officers that they shall resume, with regard to Liverpool and Glasgow, the special instructions issued a year ago when the plague was at Glasgow.

Further Provision for the Consumptive Poor in Ontario.

The National Sanatorium Association have announced that the free hospital now in course of erection near the Muskoka Cottage Sanatorium will be ready for occupation in the near

future. The main building is located in a beautiful park of 56 acres, within half a mile of the town of Gravenhurst, and is the gift of Mr. W. J. Gage of Toronto and the trustees of the estate of the late Hart A. Massey. 50 beds will be provided for the poor of Toronto, and the Grand Trunk Railway have agreed to carry 100 of these patients to the hospital and return, free of charge, every year, while all in excess of that number will be carried at half fare. Physicians and nurses who are the victims of consumption will be carried free. This new hospital of the National Sanatorium Association is for first-stage cases: advanced cases will be cared for nearer Toronto, where a fine site has recently been purchased at a cost of $30,000. It is understood that the late Mr. W. E. H. Massey has bequeathed a large sum of money for the purpose of a research laboratory at the Gravenhurst institution.

A New Sanatorium for Tuberculosis at Quebec.

The Fathers of the Holy Cross, who have charge of the Côte des Neiges College, have given a large tract of land on the north side of the second mountain at Montreal as a site for a new consumption sanatorium. Prominent physicians of Montreal have been working on this matter for some time owing to the increasing death-rate from tuberculosis during the past few years, and the above donation is part of the outcome of their endeavours. A well-known philanthropist of Toronto has offered to endow the institution sufficiently to meet the expense of running it, provided that the Provincial Government erect the building. A delegation of physicians is to wait on the members of the Government shortly in this connexion. As an evidence of the rapid growth in the death statistics from tuberculosis the following figures are interesting. In 1894 there were 2664 deaths from tuberculosis in the province of Quebec; in 1895, 2791; in 1896, 2826; in 1897, 3079; in 1899, 3487; and in 1900, 4782. There were 927 deaths alone in Montreal in 1900 from this cause.

Deaths in Ontario in September.

The total number of deaths reported in the Province of Ontario during the month of September numbered 1959, which was 531 less than for the corresponding month of 1900. Some little time ago the Provincial Board of Health sent out warnings to the clerks of municipalities, who had become lax in regard to the reporting of deaths, that the law in this respect must be complied with; and as a result in September 99 per cent. of the population were reported, which means that out of 777 municipalities 770 sent in returns. There died from scarlet fever, 13; from diphtheria, 45; from measles, 2; from whooping-cough, 17; from typhoid fever, 41; and from tuberculosis, 165.

Small-pox at the Capital.

There has been quite an outbreak of small-pox at Ottawa during the past month, something like 75 cases having been reported; and the outbreak has occasioned a few complications in health matters there. Dr. Robillard, who has been the health officer for over 20 years, has resigned, and Dr. Law has been appointed in his place. The disease so far has been very mild in its character, and on this account there has been a good deal of laxity on the part of the people with regard to observing quarantine regulations and the call for general vaccination. Then it appears that the quality of the lymph used in vaccinating has not been giving satisfaction—a factor as regards successful vaccination which has been all too common in Ontario during the past year. Feeling is running so high against compulsory vaccination that the city council will probably rescind the order for general vaccination.

Small-pox in Quebec.

In consequence of the increase of outbreaks of small-pox in the province of Quebec the Quebec Board of Health has ordered the municipal councils of the province to carry out the provisions of the Quebec Public Health Act, and to see that the heads of industrial establishments secure from all persons in their employ certificates of successful vaccination—the operation having been performed within the past seven years—or in default of such certificate to see that the employés are properly vaccinated. Further, the municipal officer of the sanitary authorities must give a similar notice to the directors of educational institutions that the pupils attending these schools must produce similar certificates or else undergo an operation for vaccination.

Fellows in Pathology at McGill University.

The medical faculty at McGill University have recently appointed two new Fellows to assist Professor Adami in the pathological department. The recipients of these honours are Dr. G. A. Charlton of Montreal and Dr H. G. Wooley of Johns Hopkins University, Baltimore, and their special work as research fellows will be to discover means to combat communicable diseases. Some little time ago the faculty appointed Dr. Ford to the Rockefeller research scholarship at McGill University. Dr. Ford has been studying at the Pasteur Institute at Paris for the past six months, but will shortly return to Canada to commence the work to which he has been appointed. During the past summer extensive alterations and additions have been in progress in the different departments of the medical faculty at McGill University.

Nov. 4th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Melbourne Hospital and Infectious Diseases.

AT the last meeting of the committee of the Melbourne Hospital the subject of provision for infectious diseases came up for consideration. At present it is the only hospital in the metropolitan area that admits infectious cases, and the accommodation is totally inadequate and unsuitable, consisting of tents, which are always overcrowded. So long ago as November, 1899, a committee was formed to proceed with the erection of an infectious diseases hospital and about £19,000 in public subscriptions were placed in its hands for the purpose. After repeated squabbles and blunderings the buildings were started, but though now built are not available for use, as the money is all spent and the buildings are not quite completed, are not furnished, and there is no provision for maintenance. In view of the expected early opening of this building the Melbourne Hospital has done nothing, but tired of waiting at last proposes to spend £5000 in erecting permanent suitable buildings for infectious cases in place of the tents. The Board of Public Health, however, objects, and "cannot give its approval to the treatment of distinctly infectious cases in any building erected in the grounds of the institution." During last year 344 cases of diphtheria, 72 of measles, 11 of scarlet fever, and five of whooping-cough were treated in the tents of the Melbourne Hospital. At the same meeting of the committee the medical superintendent reported that the number of operations had greatly increased of late, as many as 92 having been performed in a fortnight, and an additional resident surgeon was required. It was resolved that a relieving surgeon should be appointed temporarily.

The Proposed Additions to the Prince Alfred Hospital, Sydney.

The Parliamentary Standing Committee on Public Works in the New South Wales Legislative Assembly is taking expert evidence as to the expediency of constructing the additions to the Prince Alfred Hospital as proposed by the directors. Professor Anderson Stuart, Sir James Graham, M.D. Edin., Dr. C. K. Mackeller, Sir Arthur Renwick, M.D., Dr. H. N. MacLaurin, Dr. Tidswell, Dr. Purser (formerly medical superintendent of the hospital), and Dr. Blackburn (present medical superintendent of the hospital) gave evidence as to the necessity for increasing the hospital accommodation of Sydney, and generally approved of the proposed additions to the Prince Alfred Hospital, which received patients from all parts of the State and was on a suitable site. Mr. J. Kirkpatrick objected to the proposed plans. The aspect was faulty, excluding sunlight. The wards were to be connected by a dark corridor and by a staircase, so that vitiated air could travel from any ward to any other. The sanitary arrangements were not in accord with the recommendations of the Water and Sewerage Board. The proposed new wards would block the sunlight and currents of air from the existing wards. The original plans of the existing building were less defective than the proposed plans and the defects were caused by the desire to have clinical teaching-rooms attached to the wards, which were too small, accommodating only 14 patients. 32 bed-wards were much more economically worked.

Opening of the New Wing at Balmain Hospital.

The Premier of New South Wales formally opened the new wing of the Balmain Hospital. In doing so he remarked that Governments in New South Wales had all of them taken a warm interest in hospital affairs and given financial assistance. From 1890 to 1900 no less than £914,900 had been spent by the State of New South Wales in the relief of the sick.

Proposed Dental Hospital, Sydney.

Nearly 100 dentists attended a meeting on Sept. 24th to consider the advisability of establishing a dental hospital in Sydney. It was decided to establish such a hospital and an organising committee was appointed.

A Fatal Headache Powder.

A man, aged 43 years, died in Suny Hills, near Sydney, on Sept. 12th, after taking a "headache powder" obtained from a local druggist. The post-mortem examination and analysis of the stomach and other organs showed that death was due to strychnine poisoning. The druggist who supplied the powders said that they consisted of six grains of antipyrin. The boxes of antipyrin in his stock on analysis were found to be pure, but some antipyrin in a stock bottle contained strychnine as well. The druggist could not explain how the strychnine could have got into the antipyrin. The jury found that death was due to poisoning by strychnine, and "that due care had not been exercised in putting up the powder, but on whose part there was no evidence to show."

Suing Private Patients in a Public Hospital for Fees.

Two cases of interest to the profession were lately tried at the Melbourne County Court. In both Mr. M. A. O'Sullivan, surgeon to St. Vincent's Hospital, brought an action to recover his fees for operations and attendance on patients sent in by him to the private wards at St. Vincent's Hospital. In the first case he had also gone some 20 to 30 miles into the country to see the patient in consultation and the action was decided in his favour. In the second case the judge decided against him on the ground that there was not sufficient evidence of a specific contract before the patient went into the hospital.

Dr. S. T. Knaggs and the Australasian Medical Gazette.

Dr. S. T. Knaggs has resigned the position of editor-in-chief of the *Australasian Medical Gazette*, the organ of the branches of the British Medical Association in Australia. A member of the Association complained to the Council of the New South Wales Branch that there was a widespread feeling of dissatisfaction among medical men in Australia at the way the *Gazette* was conducted, and that instead of being a powerful organ as it should be it was an absolute failure. Dr. Knaggs has resigned in order to appeal to the members of the Association, but complains that the Council has practically disfranchised most of the members by deciding that the election of editor must take place in Sydney by open voting at a meeting of the branch instead of by sending a ballot paper to every member, as was done previously.

Obituary.

Extreme regret was felt throughout Victoria, and especially in the medical profession and the military forces, at the death of Colonel G. H. Fetherston, M.D. Melb., late principal medical officer to the Victorian Military Forces. Colonel Fetherston, who was 72 years of age, held many important positions. He settled in Victoria in 1860 and became resident medical officer to the Women's Hospital and his association with the military forces commenced in 1866, when he was gazetted surgeon-lieutenant in the Victoria Volunteers. On the reorganisation of the forces upon a militia basis he was made surgeon-major, and in 1890 became principal medical officer with the rank of colonel. For over 20 years he was honorary surgeon to the Women's Hospital and was one of the oldest members of the University Council. He was also chairman of the Medical Board and chairman of the honorary justices at Prahran, where he lived and practised, and for which place he was also health officer. He had a large practice at one time and was generally esteemed by his brethren in the profession. He was given a military funeral which was very largely attended—indeed, the military cortège was the largest seen in Melbourne for many years.—Dr. H. G. A. Wright, of Wynyard-square, Sydney, died suddenly from heart disease. He was 74 years old and had practised in Sydney since 1854. He attended he late Duke of Edinburgh when he was shot in Sydney. He joined the Royal Society of New South Wales in 1872 and held the office of treasurer from 1879 to 1885 and again from 1893 to his death; he, however, could never be prevailed upon to assume the position of president, though it was repeatedly open for his acceptance. Dr. Wright was a proficient in astronomy, photography, and microscopy. He was widely respected and his funeral was very largely attended both by the profession and by eminent citizens.

Oct. 8th.

Obituary.

JOHN CONNEL, M.D., F.R.C.P. EDIN., M.A. ST. AND.

THE Scottish Lowlands and Tweedside in particular have sustained a heavy loss by the untimely death of Dr. John Connel of Peebles, which took place on Nov. 2nd in Edinburgh. He had gone thither about a fortnight before to undergo an operation for malignant tumour of the rectum. From this he never rallied, and in spite of all that skill and care could do he succumbed in his fifty-ninth year. A "son of the manse," he was born at Bo'ness in West Lothian, where his father, the Rev. David Connel, had long held with ability and acceptance the post of United Presbyterian pastor, his mother being the eldest daughter of another light of the Scottish ministry—the Rev. Archibald Browning of Tillicoultry. His education, begun at home, was further prosecuted at Croft Lodge Academy, Rothesay, and at Bonnington Park School, Peebles, of both of which institutions his uncle, Dr. James Browning, was the scholarly and efficient headmaster. Thence he proceeded to the University of St. Andrews, matriculating in the Faculty of Arts, and distinguishing himself in all the classes, till he took his Master's degree with first-class honours in Latin and Greek, while also gaining the Miller prize for proficiency in modern languages. Thus equipped he entered on the study of medicine in the University of Edinburgh, where again he took a foremost place in the classes, obtaining the bronze medal in chemistry and first-class honours in medica materia. He graduated with distinction M.B. and C.M. in 1867, proceeding to the "*summi in medicinâ honores*" in 1873 and was elected Fellow of the Royal College of Physicians of Edinburgh in 1877.

Dr. Connel began professional work at Melrose under Dr. Brown and thence repaired to Peebles as successor to Dr. J. B. Junor whose daughter he married in 1870. Retaining and extending his predecessor's *clientèle* he rose to be the most active and popular practitioner in Tweedside, skilful in all surgical and obstetric cases and not less so in medicine proper. He held many appointments under Government and in local administration, being medical referee under the Workmen's Compensation Act, surgeon to the county prison and county poorhouse, parochial medical officer of Eddlestone, local medical officer to the Board of Health, and medical referee to the Scottish Widows Fund and other assurance offices; while in the scientific department of the profession he filled the posts of president of the Border Counties Branch of the British Medical Association, president of the Edinburgh Obstetrical Society, and president of the Edinburgh Harveian Society. His addresses in a presidential capacity were greatly admired for their intellectual breadth and moral sympathy as well as for their scholarly finish of style, particularly those delivered before the Harveian Society and the Obstetrical Society—both being published by request, the latter in the *Edinburgh Medical Journal* for February, 1885. Of his special contributions to professional literature the most important is his "Fatal Case of Post-partum Hæmorrhage after Injection of Perchloride of Iron," which appeared in the above-named periodical in 1875. With all this Dr. Connel was a public-spirited citizen and a prominent participator in all discussions bearing on the common weal. A fluent speaker, trained in the Royal Medical Society of Edinburgh, in the debates of which he distinguished himself, he appeared from time to time on the public platform, always in furtherance of hygienic and social reform, mainly in the direction of temperance legislation. Inheriting a special interest in education, he was for 21 years chairman of the school board and left a salutary mark on the burgh in his capacity of justice of the peace and honorary sheriff-substitute of the county. To the last he kept up his academically high standard

of scholarship and formed one of a select society of professional men—clerical, legal, and other—who, not content ἐν ἀμουσίᾳ καὶ ἀμαθίᾳ καταβιῶναι, met periodically at each other's houses to read and to discuss some Greek or Roman master-work in the original tongue. In truth, it is difficult to say by what interest, scientific, literary, political, social, or religious, he will not be sorely missed, whether on the school board, where he was an ardent promoter of the recognition of science, natural and physical, in the curriculum; or on the literary platform where he lectured on "Materialism," "Temperance," "Astronomy" (the latter a subject in which he had an expert's knowledge), or on the "Lights and Shadows of the Lifeboat Service"; or in the public meeting where his voice was always raised for "*imperium et libertas*"; or in the Church conferences where his influence went cordially for a healthy latitude of belief in harmony with the reverential spirit. To the youth of his town and neighbourhood, above all to the young professional brother on the threshold of his career, he was the best and steadiest of friends, and many of these now prosperous in practice in distant climes will cherish the memory of the gifted, scholarly, and kindly practitioner whose sun has gone down while it was yet day.

WILLIAM GEORGE NICHOLAS MANLEY, C.B., V.C., M.R.C.S. ENG.,

SURGEON-GENERAL ARMY MEDICAL DEPARTMENT (RETIRED).

SURGEON-GENERAL MANLEY died at his residence in Lansdown-terrace, Cheltenham, on Nov. 16th. Born in Dublin in 1831, the son of a clergyman, he obtained the diploma of M.R.C.S. Eng. in 1852 and in March, 1855, entered the army as an assistant surgeon. The war with Russia was then in progress and he served with the Royal Artillery in the Crimea from June 11th, 1855, being present during the siege and fall of Sebastopol and receiving the medal with clasp and the Turkish medal. He also served with the Royal Artillery in the New Zealand war of 1864–66. During that campaign he volunteered to accompany the storming party at the assault of the Gate Pah near Tauranga on April 29th, 1864, and was awarded the Victoria Cross for risking his life in his endeavour to save that of Commander Hay of the Royal Navy and others. He attended Commander Hay when he was carried away mortally wounded, and then volunteered to return in order to see if he could find any more wounded. It was stated that he was one of the last officers to leave the pah. He also accompanied the field force under General Chute in the expedition from Wanganui to Taranaki, and was present at the assault and capture of several pahs. For these services he received a medal, was thanked in general orders, and was promoted to be staff-surgeon for his "distinguished and meritorious services rendered to the sick and wounded." He also received the bronze medal of the Royal Humane Society for rescuing a gunner of the Royal Artillery who had fallen into the Waitotara river, New Zealand. In the Franco-German war of 1870–71 he was in charge of the B division of the British Ambulance and was attached to the 22nd Division of the Prussian army, accompanying it during the operations consequent on the advance on Orleans. For his services on these occasions he was thanked by General von Wittich commanding the division, and received the German steel war medal, the second class of the Iron Cross, and the Bavarian Order of Merit. He also served in the Afghan war in 1878–79 for which he received a medal, and in the Egyptian war of 1882 as principal medical officer of the 2nd Division. He was present at the battle of Tel-el-Kebir, was mentioned in despatches, was promoted to be deputy-surgeon-general, and received a medal with clasp, the third class of the Osmanieh, and the Khedive's star. He retired from the army in 1884 with the honorary rank of surgeon-general, and was subsequently created Companion of the Bath and Knight of Grace of the Order of St. John of Jerusalem. Deceased has left a widow and five sons and one daughter.

The late Surgeon-General Manley was not only a man of great physical but of great moral courage also—and the two do not by any means always go together. He was a very trustworthy and pleasant comrade. He spared no pains to bring himself up to date in matters connected with the scientific progress of his profession and their application to military surgery as well as in those connected with field hospital administration. He had had great experience in the field, as his long and distinguished record of service shows, and, whenever needful, was prompt and fearless in assuming responsibility. He believed that "measures not men" was only partially true, because his personal experience and practical acquaintance with life taught him otherwise, and that men of the right stamp and qualifications were just as necessary as the best of measures; he also believed in the influence of rewards and punishments in getting men to do their work well, and in the application of the principle of promotion by selection. If he were unstinted in his praise of any unusual zeal and ability on the part of those serving under him, he was not the man to overlook negligence and want of capacity. In the Egyptian war of 1882 he was placed in charge of the Citadel hospital on the arrival of the British force at Cairo, where he did excellent work. The building which, we believe, had been the Egyptian War Office, was, for one thing, in an indescribable state of uncleanliness, and its fitting-out and organisation as a hospital with the work of invaliding going on caused a great strain, but it could not have fallen on a more capable man. He was succeeded in medical charge of this hospital by a very capable officer, the late Deputy-Surgeon-General Barnett.

JAMES MANN WILLIAMSON, M.D. EDIN.

ON Tuesday, Nov. 12th, the Isle of Wight lost one of its best known medical practitioners by the death of Dr. J. M. Williamson of Ventnor, after a long and trying illness patiently borne. He was the son of the late Dr. James Williamson of Petherton-road, London, and formerly of South Shields. He received his school education first in Shields, his native town, and afterwards in the High School of Edinburgh, of which he was one of the most successful and distinguished pupils. Subsequently he was under the educational care of the late Rev. Dr. Angus and prepared for graduation in the University of London, passing the matriculation examination. But he finally decided to graduate in Edinburgh, which he did as M.B. and M.S. in 1872 and as M.D. in 1877. During his career as a student he had several attacks of rheumatic fever which left their impress on his heart and laid the foundation of troubles which in many men tend to spoil life, but only serve to illustrate the inherent and dogged energy of strong characters. He went to Ventnor as resident physician to the Royal National Hospital for Consumption more than a quarter of a century ago and has since been one of its foremost and most consulted practitioners. He was indeed a model adviser, believing in, and enjoying the practice of, his art, and studying not only the disease but the patient also, having capacity for dealing with emergencies as well as with common diseases. Living in Ventnor he naturally gave great attention to the treatment of diseases of the chest. He kept himself abreast of all advance in clinical medicine, diagnostic or therapeutic, and would have made as successful a teacher as he was a practitioner. For many years he was honorary surgeon to the Royal National Hospital for Consumption and it was a disappointment to him that on the death of Dr. Hassall he was not made physician to the hospital. At length, on the death of Dr. J. G. S. Coghill, he was made physician, much to his gratification. But the honour came too late. By this time, after a succession of attacks of influenza, his health was much broken and he was physically unfit to do justice to hospital work in addition to that of his large private practice. After a few months he resigned the appointment. Soon after doing so he had to restrict his private work. In January, 1900, in the middle of one of his illnesses the death of his beloved wife occurred, not suddenly but after a rapid and unexpected illness, and gave a terrible blow to his failing powers. He temporarily recovered, but in the beginning of this year cardiac troubles again laid him aside, and on medical advice he resolved to hand over his practice to his then assistant, Dr. T. A. Ross. In the summer he recovered so far as to be able to get downstairs and to see a patient occasionally in his own house. About three weeks ago with colder and misty weather his cardiac troubles began to get worse and culminated in his death. A few days before his death he had the advantage of a visit from Dr. J. Mitchell Bruce. He was also visited by Dr. J. G. Glover of Highbury, with whom his friendship had been lifelong and unbroken. Dr. Ross was incessant and untiring in his medical attentions to Dr. Williamson. The esteem in which Dr. Williamson was held in Ventnor

and the neighbourhood was great and was shown three days before his death in a way which touched him much. The Vicar of Ventnor visited him and presented him, in the name of a number of his neighbours, patients, and friends, with an antique clock with a double set of chimes, an illuminated address contained in a volume bound in morocco, and a cheque representing the balance of a sum amounting in all to about £200. An equally striking proof of the respect in which Dr. Williamson was held was given on the day of his funeral. All shops were closed and nearly the whole population of Ventnor, including his professional brethren, attended, besides many from other parts of the island. His death at the early age of 52 years leaves a conspicuous blank in Ventnor, where he will be much and long missed. He leaves one daughter and one son.

ROBERT BARBOUR McKELVIE, M.D. GLASG.

IN the passing away of Dr. Robert Barbour McKelvie Argyllshire and the Western Highlands lose a well-known figure and a most conspicuous personality. When apparently in his usual health he was struck down by apoplexy on the morning of Nov. 5th and succumbed within 10 hours of the seizure. Born in the island of Arran and educated at Ayr Academy, he proceeded to Glasgow University, where he gradeated as M.D. in 1858. For two years he acted as assistant, first at Ayr and subsequently at Dalry, Ayrshire. He then obtained the post of medical officer of the united parishes of Appin and Lismore, to which district he afterwards added the adjacent parishes of Ardchattan and Muckairn. It was at the time to him a proud thought that for the 15 years during which he held these posts his medical services were bestowed over a greater area than that held by any other parochial medical officer in Great Britain. His professional skill caused him to be frequently called upon for consultations by his colleagues in different parts of Argyllshire, and over the whole land of Lorne and the island of Mull he was constantly to be met with journeying by ferry or on his pony, and perhaps most often on foot. In 1875 he succeeded the late Dr. Macgilvray and settled at Oban. There for 26 years he was the principal medical figure. But the laborious life of a country practitioner, the broken rest, the long journeys, and the constant exposure to all weathers must eventually tell upon the strongest constitution, and for some time past it was noticed that his erect figure was bending to the weight of years, and that he was losing vigour and becoming prematurely aged. He was carried off before he had reached his sixty-fifth year, yet his end was as he desired it might be. He never witnessed a sudden death without expressing the hope that that might be the mode of his exit from this stage of life. He benefited Oban by his gift of the McKelvie Isolation Hospital for the treatment of infectious diseases, and his fellow-townsmen were indebted to him for innumerable acts of kindness and generosity, friendly counsel, and help in many ways. He was a man of buoyant and genial spirit, and possessed a wonderful facility for repeating anecdotes. The large and sympathetic gathering which attended his funeral on Nov. 9th was a striking testimony to the esteem in which he was popularly held.

JOHN PALMER WAY, M.R.C.S. ENG., L.S.A.

BY the death of Mr. J. P. Way, which took place at his residence, The Limes, North End, Portsmouth, on Nov. 16th, Portsmouth loses one of its best known practitioners. Born on Nov. 5th, 1838, the son of a local solicitor, Mr. Way was first destined for the legal profession, but eventually became a pupil of the late Mr. Piercy, a Portsmouth practitioner, under the old apprenticeship system. Subsequently he entered as a pupil at St. Thomas's Hospital where he held the appointment of resident accoucheur. Becoming qualified as L.S.A. in 1862 and M.R.C.S. Eng. in 1863 he soon afterwards entered the Royal Navy as assistant surgeon, in which capacity he served until 1867. He then took up his residence at Mile End, Portsmouth, where by his kindness of heart and devotion to his patients he rapidly acquired a large practice. For some years he held the appointment of surgeon to the Royal Portsmouth Hospital. Mr. Way thoroughly recognised a brother practitioner's honour as his own and was always ready to assist in absence or in cases of doubt and difficulty. For some five years past he had suffered from angina pectoris which curtailed his labours considerably, but he still continued to see his patients. Some two months ago he caught cold, a severe attack of pneumonia supervened, and in spite of all the care bestowed upon him by his medical friends he quietly sank to rest.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ORDINARY MEETING.

AN ordinary meeting of the Council was held on Nov. 14th, the President, Mr. H. G. HOWSE, being in the chair.

The SECRETARY reported the death, on Oct. 29th, of Mr. Henry Spencer Smith, past member of the Council and of the Court of Examiners. The following resolution was carried:—

The Council do hereby express their sincere condolence with the widow and family of Mr. Henry Spencer Smith in the loss they have sustained by his death, and do also record their appreciation of the services rendered by Mr. Spencer Smith to the College in the conscientious discharge of the several duties which devolved upon him as a member of the Council and of the Court of Examiners.

A letter was read from Mr. E. F. Drake-Brockman, F.R.C.S., offering to the College on behalf of his son, Major Herbert Drake-Brockman, I.M.S., a complete set of surgical instruments used by the "Suttiahs" (or native doctors) of India in operations on the eye. The gift was accepted with thanks.

A letter was read from Miss Bartley of Mitcham offering to the College a pocket-case of surgical instruments which belonged to Mungo Park, and a letter, dated April 6th, 1816, from Sir Anthony Carlisle stating that the case had been given to him by Mungo Park, and presenting it to Miss Bartley's father. The gift was accepted with thanks.

The PRESIDENT laid before the Council a bronze copy of the Cartwright medal.

The PRESIDENT stated that the Bradshaw Lecture would be delivered by Mr. T. R. Jessop on Wednesday, Dec. 11th, at 5 o'clock P.M., and that the subject of the lecture would be, "Personal Experiences in the Surgical Treatment of Certain Diseases."

ANNUAL MEETING OF FELLOWS AND MEMBERS.

The seventeenth annual meeting of Fellows and Members was held at the College on Nov. 21st, at 3 P.M., the President, Mr. H. G. HOWSE, being in the chair.

The PRESIDENT placed before the meeting the report of the Council for the year ending July 31st, 1901. He drew attention to a few points in the report, especially to the fact that for the first time the names of the Members of the College who had died during the year had been inserted.

Dr. THOMAS MORTON then moved:—

That this annual meeting of Fellows and Members adheres to the opinion, which it has regularly expressed during the last 17 years, that a certain proportion of the College Council should be elected by the Members. As, however, the Council has hitherto refused to entertain this proposal, it is hereby invited to suggest some alternative means by which the Members may be admitted to that share in the direction of the affairs of the College to which they are entitled on account of their membership, their numbers, their professional status, their large contribution to the College income, and by the fact that in them alone is vested the whole of the College property.

He stated his conviction that one day or other this reform would be carried. It was not possible that the 16,000 Members of the College could for ever be debarred from their share in the government of the College. He earnestly asked the Council to suggest some way in which the Members might be represented.

Mr. JOSEPH SMITH, who seconded, expressed his opinion that the suggested change would strengthen the College.

Mr. F. W. COLLINGWOOD said that in these democratic times the constitution of the College should be more democratic.

Surgeon-Major J. INCE considered the constitution to be an anachronism.

Several other Members spoke, and the motion was carried.

Mr. GEORGE BROWN moved:—

That this meeting regrets that the Council has adopted the policy of contravening the regulations of the General Medical Council in the matter of the recognition of scientific institutions, thereby acting disloyally to the General Medical Council and setting an example which, if followed by other licensing bodies, must result in materially lowering the standard of medical education.

He looked upon the action of the College in this matter as tending to retard th improvement of medical education.

Mr. NELSON HARDY seconded.

Mr. T. R. ATKINSON thought it was almost impertinent for the meeting to venture to express an opinion on a matter about which they had not sufficient data.

Mr. BRYANT, though it would be well to postpone the motion as the matter was still *sub judice*.

Mr. W. G. DICKINSON and Mr. J. SMITH having spoken, the PRESIDENT pointed out that the action of the Council had been dictated solely by a desire not to surrender without sufficient reason the legal rights of the College.

The motion was carried by 16 to 6.

Dr. G. DANFORD THOMAS moved:—

That this meeting concurs generally in the suggested amendments to the Medical Acts mentioned as desirable in the letter quoted on pages 5 and 6 of the Report. This meeting regrets, however, that the Council declines to actively promote even those amendments of which it approves, and trusts that it will at least give hearty support to the Bill of the British Medical Association when it comes before Parliament.

He hoped that the Council would consider carefully the Bill, of which he handed in six copies, and if they could see their way to support it it would be of very great service to the Bill.

Mr. DICKINSON seconded, and the PRESIDENT promised that he would bring the matter before the Council.

Mr. BRINDLEY JAMES next moved:—

That this meeting is of opinion that the representative of the College in the General Medical Council should be elected jointly by the Fellows and by Members of 10 years' standing.

He asked that the Council, who had the legal power to do so, would permit the Fellows and Members to elect the representative of the College.

Mr. JOSEPH SMITH seconded, and the PRESIDENT having shown the necessity there was for the representative of the College being a member of the Council of the College, the motion was carried.

The last motion was that of Dr. HERBERT SNOW who moved:—

That it is inadvisable to continue to hold the annual meeting with closed doors; and that the Council be requested to sanction the free admission of the public to the gallery.

He considered that to exclude strangers from the gallery was against the best interests of the College and was against the spirit of the times.

Mr. BRINDLEY JAMES seconded.

The motion was lost by 8 votes to 7.

Medical News.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following gentlemen having passed the necessary examination have been admitted Licentiates in Dental Surgery of the College:—

Thomas Beaumont, Francis Xavier Costello, Ben Farrar Cowper, and Edward Thomas Patley.

FOREIGN UNIVERSITY INTELLIGENCE.—*Ghent:* Dr. van Duyse and Dr. Gilson have been respectively promoted to Ordinary Professorships of Pathological Anatomy and Pharmacognosis.—*Jena:* Dr. E. Giese has been recognised as *privat-docent* of Forensic Medicine.—*Liege:* Dr. P. Snyers has been appointed Extraordinary Professor of Internal Medicine.—*Munich:* Dr. R. Barlow has been appointed Extraordinary Professor of Dermatology, and Dr. G. Klein Extraordinary Professor of Midwifery and Gynæcology.—*Naples:* Dr. Carlo Cucca has been recognised as *privat-docent* of Midwifery and Gynæcology. Dr. Giulio Martuscelli as *privat-docent* of Laryngology and Dr. O. Barrago Ciarella as *privat-docent* of Otology and Rhinology.

THE Lord Chancellor has placed the name of John Horne, M.D., The Wick, Scarborough, on the Commission of the Peace for the North Riding of Yorkshire.

VACCINATION GRANT.—Mr. C. C. Skardon, L.S.A., the public vaccinator of Evershot, has received the Government grant for the second time in succession for successful vaccination in the Beaminster Union Districts.

DEATHS OF CENTENARIANS.—The death occurred on Nov. 11th at Cheltenham of Mrs. Haines at the age of 104 years and eight months.—Mrs. Mary Bown, aged 103 years, died in Milk-street, Bath, on Nov. 14th.

COLSTON DAY IN BRISTOL.—Nov. 13th was observed in Bristol as Colston Day in the customary manner, and at the banquets held in the evening the sum of £3400 was collected for the various charities.

THE Sanitary Institute, in connexion with its recent conference on Water-supply, has held an exhibition of the principal filters alleged to prevent infection, and has given its highest award (the silver medal of the Institute) to the Pasteur-Chamberland filter.

BEQUESTS AND DONATIONS TO HOSPITALS.—The Committee of the North London Hospital for Consumption, Mount Vernon, Hampstead, N.W. have received a donation of £1000 from Mrs. George Field to name a bed in memory of her late husband.

FREE ANTITOXIN.—At a meeting of the Crewe Town Council held on Nov. 9th it was resolved that a minute of the Health Committee deciding on the recommendation of their medical officer of health to supply antitoxin free for cases of diphtheria be confirmed.

ENTERIC FEVER AT PLYMOUTH.—At the meeting of the Plymouth Borough Council held on Nov. 11th the sanitary committee reported, on the authority of the medical officer of health, that the recent outbreak of enteric fever was practically at an end.

TUBERCULOSIS AND MUNICIPAL CORPORATIONS AND COUNTY COUNCILS.—At a meeting of the Council of the National Association for the Prevention of Consumption and other Forms of Tuberculosis, held in London on Nov. 11th, Dr. Nathan Raw brought forward the following motion: "That in the light of our present knowledge the time has now come when the whole question of tuberculosis, including treatment for suitable cases in municipal sanatoria, should be undertaken by the municipal corporations and county councils throughout the country." After full discussion the motion was put from the chair by Sir W. Broadbent, Bart., and seconded by Mr. Malcolm Morris, and carried unanimously.

THE WORKMEN'S COMPENSATION ACT.—At the Taunton County Court on Nov. 12th an undertaker brought an action against a man to recover £9, the expenses of a funeral for his deceased son. Evidence showed that the defendant's son met with a fatal accident at the new Taunton reservoir works for which the father received £50 as compensation from the contractor, and that he promised to pay the undertaker out of this sum. The solicitor for the defence contended that the £50 which were obtained under the Workmen's Compensation Act were not part of the deceased's estate, and therefore the defendant was not liable for funeral expenses out of that sum. His Honour gave judgment for the plaintiff for the amount claimed with costs, and granted leave to appeal.

FREEMASONRY.—*The Sancta Maria Lodge.*—The installation meeting of the Sancta Maria Lodge, No. 2682, was held at Mark Masons Hall on Nov. 12th, when the incoming Master Bro. H. Pearce was installed by Bro. A. P. Luff, whose term of office in the chair had expired. The ceremony was attended by a number of grand officers, among whom were Bro. Clement Godson and Bro. H. W. Kiallmark, and by the masters of many of the kindred lodges, including Bro. Ernest Clarke of the Æsculapius Lodge; Bro. Phineas Abraham of the Rahere Lodge; Bro. A. E. Sansom of the London Hospital Lodge; and Bro. T. Wakley, jun., of the Cheselden Lodge. The following were appointed to the principal offices of the lodge: Bro. Handfield Jones, S.W.; Bro. P. P. Whitcombe, J.W.; Bro. Rev. H. S. Cronin, chaplain; Bro. Malcolm Morris, treasurer; and Bro. J. Ernest Lane, secretary. After the Masonic business was finished the brethren to the number of 56 dined at the Freemasons Tavern.

THE NOTIFICATION OF SMALL-POX.—On Nov. 13th Mr. John Padman, M.R.C.S. Eng., of Bloomsbury-square, appeared at Bow-street Police-court to answer a charge made against him by the Holborn Guardians to the effect that he had failed to notify a case of small-pox. The evidence brought forward by the prosecution showed that Mr. Padman was in doubt as to whether the case was one of small-pox or chicken-pox and inclined to the belief that it was chicken-pox. No evidence was called on his behalf, the

counsel for the defence submitting that there was not a particle of evidence to show that any offence had been committed. Mr. Padman had, as a matter of fact, shown commendable caution in arriving at a diagnosis and at the same time had taken every care to check infection. The summons was dismissed without costs. Mr. Padman was defended by the London and Counties Medical Protection Society.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL AND COX, 8, Henrietta-street, Strand, W.C.

Medical Monograph Series, No. 5. Edited by David Walsh, M.D. Menstruation and its Disorders. By Arthur E. Giles, M.D., B.Sc., F.R.C.S., M.R.C.P. Price 2s. 6d. net.

On the Cure of the Morphia Habit without Suffering (Physiological Demorphinisation). With a Note on the Physiological Method of Relieving the Craving for Drink. By Oscar Jennings, M.D. Paris, M.R.C.S. Eng. Second edition, revised and enlarged. Price 3s. 6d. net.

CASSELL AND COMPANY, LIMITED, London, Paris, New York, and Melbourne.

The Practical Nursing of Infants and Children. By Frank Cole Madden, M.B., B.S. Melb., F.R.C.S., formerly Medical Superintendent of the Hospital for Sick Children, Great Ormond-street, London. Price not stated.

CHARLES GRIFFIN AND COMPANY, LIMITED, Exeter-street, Strand, W.C.

Ferments and their Actions. By Carl Oppenheimer, M.D., Ph.D., Assistant in the Physiological Institute at Erlangen. Translated from the German by C. Ainsworth Mitchell, B.A. Oxon., F.I.C. Price not stated.

CHATTO AND WINDUS, 111, St. Martin's-lane, W.C.

Familiar Studies of Men and Books. By Robert Louis Stevenson. Large type, fine-paper edition. Price 2s. net in cloth; 3s. net in leather.

A Sower of Wheat. By Harold Bindloss, author of "Ainslie's Ju-Ju," "In the Niger Country," &c. Price 6s.

Tales of a Dying Race. By Alfred A. Grace. Price 3s. 6d.

Three Men of Mark. By Sarah Tytler, author of "Citoyenne Jacqueline," "Mrs. Carmichael's Goddesses," &c. Price 6s.

The Cankerworm, being Episodes of a Woman's Life. By George Manville Fenn, author of "The New Mistress," "The Master of the Ceremonies," "A Crimson Crime," &c. Price 6s.

In London's Heart. By George R. Sims, author of "Rogues and Vagabonds," "How the Poor Live," &c. Price 2s.

Only a Nigger. By Edmund Mitchell, author of "The Lone Star Rush," "Plotters of Paris," &c. Price 6s.

Thoreau: His Life and Aims. By H. A. Page, author of "The Life of Thomas De Quincey," &c. Price 2s. 6d.

Told by the Taffrail. By Sundowner, author of "Rambles in Polynesia," "Wild Life in the Pacific," &c. Price 3s. 6d.

The Gentleman's Annual, Christmas, 1901. Containing a complete novel, "As it was written," by T. W. Speight, author of "The Mysteries of Heron Dyke," "The Doom of Siva," &c. Price 1s.

A Versailles Christmastide. By Mary Stuart Boyd. With 53 illustrations by A. S. Boyd. Price 6s.

EYRE AND SPOTTISWOODE, London.

Minutes of Evidence taken by the Indian Plague Commission (1898-99), with Appendices. Volume I. Price 10s. Vol. II. Price 8s. Vol. iii. Price 15s. 5d.

Indices to the Evidence, also Glossary, Maps, and Summary of the Report and Appendices. Vol. iv. Price 4s. 3d.

Report of the Indian Plague Commission, with Appendices and Summary. Vol. v. Price 4s. 6d.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Das Licht als Kraft, und seine Wirkungen. By Dr. Fritz Frankenhäuser, Assistenten an der Königl. medicinischen Universitäts-Poliklinik zu Berlin. Price M.2.

KARGER, S., Karlstrasse, 15, Berlin (WILLIAMS AND NORGATE, 14, Henrietta-street, Covent-garden, W.C.

Lehrbuch der Nervenkrankheiten für Aerzte und Studierende. By Professor Dr. H. Oppenheim of Berlin. Third enlarged and revised edition. Price 27s. net.

MURRAY, JOHN, 50, Albemarle-street, W.

Impressions of a Doctor in Khaki. By Francis E. Fremantle, M.A., M.B., B.Ch. Oxon., M.R.C.P., late Civil Surgeon to H.M. forces in South Africa. Price 10s. 6d. net.

SMITH, ELDER, AND CO., 15, Waterloo-place, London.

The Great Boer War: A two years' record, 1899-1901. By A. Conan Doyle. With maps. New edition, being the thirteenth impression. Price 7s. 6d.

TOKIO PRINTING CO., LTD., Tokio, Japan.

The Surgical and Medical History of the Naval War between Japan and China during 1894-95. Translated from the original Japanese report, under the direction of Baron Saneyoshi, F.R.C.S. Eng., &c., Director-General of the Medical Department of the Imperial Japanese Navy, by S. Suzuki, M.R.C.S. Eng., L.R.C.P. Lond., &c., Deputy Inspector-General of Hospitals and Fleets, Imperial Japanese Navy. Price not stated.

WILLIAMS AND NORGATE, 14, Henrietta-street, Covent-garden, W.C.

Studies in Heterogenesis. By H. Charlton Bastian, M.A., M.D., F.R.S. First part, with 210 illustrations from photomicrographs. Price 7s. 6d.

WITHERBY AND CO., 326, High Holborn, W.C.

The Royal Navy List Diary and Navy Handbook for 1902. Price 5s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

AIRD, I., M.B., B.S., Edin., has been appointed Certifying Surgeon under the Factory Acts for the Bangor District of County Down.

BARTON, G. A. H., M.D. Brux., M.R.C.S., L.S.A., has been appointed an Honorary Assistant Anæsthetist to the City Orthopædic Hospital.

GLOVER, DR., has been appointed Medical Officer of Health, *pro tem.*, to the Woodbridge Urban District Council.

GRIEVES, JAMES P., M.R.C.S., L.R.C.P., has been appointed Medical Officer to the Post Office for the Leytonstone Division.

INGLE, C. D., M.R.C.S., F.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Acts for the Somerton District of the county of Somerset.

JOYNES, FRANCIS JAMES, M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health by the Dursley (Gloucestershire) Rural District Council.

PARRY, LEONARD A., F.R.C.S. Eng., B.S., M.D. Lond., has been appointed Assistant Surgeon to the Sussex Eye Hospital, Brighton.

PATERSON, M. S., M.B., B.S. Durh., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Hospital for Consumption and Diseases of the Chest, Brompton.

ROCHE, REDMOND, A.B., M.R.C.S., L.R.C.P. Lond., L.M., has been appointed Attending Medical Officer, Westminster Dispensary, Westminster, vice J. E. Sinclair, L.R.C.P. Lond., L.R.C.S., resigned.

SELKIRK, J. FREDERICK, M.B., Ch.B. Edin., has been appointed House Surgeon to the Chichester Infirmary.

TAYLOR, F. E., M.A., M.B., Ch.B., M.Sc., M.R.C.S., L.R.C.P., late Resident Medical Officer is appointed Registrar to the Chelsea Hospital for Women.

THORNTON, GEORGE, M.D., M.S. Edin., M.R.C.P. Lond., M.R.C.S. Eng., D.P.H. Oxford., has been confirmed in his appointment as Medical Superintendent of the Civil Hospital, Pretoria, by His Excellency Lord Milner, the administrator of the Transvaal.

WATSON, DR., has been appointed Medical Officer to the District Council of Cottingham.

WIGHTWICK, CHARLES PITT, M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for Malmesbury.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BEVERLEY DISPENSARY AND HOSPITAL.—Medical Officer and Dispenser. Salary £160 per annum.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, Birmingham.—Clinical Assistant.

BRACEBRIDGE ASYLUM, near Lincoln.—Junior Assistant Medical Officer, unmarried. Salary £125 per annum, with apartments, board, attendance, &c.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £100, with board, residence, and washing.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CHESTER GENERAL INFIRMARY.—House Physician. Salary £90 per annum, with residence and maintenance.

COUNTY ASYLUM, Mickleover, Derby.—Senior Assistant Medical Officer. Salary £150, rising to £180 per annum; also Junior Assistant Medical Officer. Salary £120, rising to £150 per annum; both with apartments, board, washing, and attendance.

COUNTY OF EAST SUSSEX.—Medical Officer of Health. Salary £200 per annum, with fees, &c.

CROYDON GENERAL HOSPITAL.—Senior and Junior House Surgeons, unmarried. Salary, senior £105, junior £80, with board, laundry, and residence.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—House Surgeon and Assistant House Surgeon. Salary, House Surgeon £100 per annum, Assistant £50 per annum, with apartments, board, and lodging.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Physician, for six months. Honorarium of £25, with board and residence.

GENERAL INFIRMARY, Leeds.—Resident Surgical Officer. Salary £100 per annum, with board, residence, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £20, washing allowance, and board and residence in the hospital.

HOSPITAL FOR WOMEN, Soho-square.—Clinical Assistantships.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST (In-patient Department, Bowdon, Cheshire).—Resident Medical Officer. Salary £100 per annum, with board, apartments, washing, and railway contract to Manchester.

MIDDLESEX HOSPITAL, W.—Medical Officer and Registrar to the Cancer Department. Salary £100 per annum, with board and residence.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and also Assistant Resident Medical Officer. Salary at rate of £50 per annum attaches to each post, with board, residence, and washing.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—House Surgeon. Salary £120 per annum, with increase, and apartments, board, and washing.

NOTTINGHAM GENERAL HOSPITAL.—House Surgeon. Salary £100, rising to £120, with board, lodging, and washing.

OWENS COLLEGE, Manchester.—Assistant Lecturer in Pathology. Stipend £150 per annum.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Honorary Dental Surgeon.

PERTH DISTRICT ASYLUM, Murthly.—Assistant Physician, unmarried. Salary £110, with apartments, board, attendance, &c.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—Assistant House Surgeon, for six months. Salary at rate of £80 per annum, with board and residence.

ROYAL ALBERT EDWARD INFIRMARY, Wigan.—Junior House Surgeon. Salary £80 per year, with rations and apartments.

ROYAL EAR HOSPITAL, Soho.—House Surgeon. Small honorarium.

ROYAL HANTS COUNTY HOSPITAL.—House Physician, unmarried. Salary £65 per annum, rising to £75, with board, residence, &c.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Resident Medical Officer, for four months. Salary at rate of £70 per annum.

ROYAL HOSPITAL FOR INCURABLES, Donnybrook, Dublin.—Resident Medical Officer. Salary £100 per annum, with board and apartments.

ROYAL INFIRMARY, Sheffield.—Casualty Officer. Salary £100 per annum, with board, lodging, and washing.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square.—Resident Medical Officer. Salary 100 guineas per annum, increasing to 120 guineas, with apartments, attendance, coal, and light.

ST. MARY'S HOSPITAL FOR SICK CHILDREN, Plaistow, E.—Assistant Resident Medical Officer (unmarried) for six months. Salary £80 per annum, with board, residence, laundry, &c.

ST. MARY'S HOSPITAL, Quay-street, Manchester.—House Surgeon and Resident Obstetric Assistant Surgeon. Salary £100 per annum, with board and residence.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road.—Honorary Physician.

SCHOOL BOARD FOR LONDON.—Medical Officer. Salary £300 a year, rising to £1000 a year.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months. Salary at rate of £50 per annum, with food and residence.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—House Surgeon. Salary £200 per annum.

SUSSEX COUNTY HOSPITAL, Brighton.—Third House Surgeon, unmarried. Salary £80 per annum, with board, residence, and washing.

THROAT HOSPITAL, Golden-square, W.—Three Honorary Anæsthetists.

WEST HAM UNION.—Lady Assistant Medical Officer. Salary £100 per annum, with residential allowances.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician; also House Surgeon for six months. Board and lodging are provided.

WINDSOR AND ETON ROYAL DISPENSARY AND INFIRMARY.—House Surgeon, unmarried. Salary £120 per annum, with residence, board, washing, and attendance.

WILTS COUNTY ASYLUM.—Assistant Medical Officer, unmarried. Salary £150, rising to £180, with board, residence, attendance, and washing.

WORCESTER COUNTY AND CITY ASYLUM.—Junior Assistant Medical Officer. Salary £120 per annum, increasing to £150, with board, apartments, and washing.

The Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies under the Factory Acts as Certifying Surgeons at Camolin, in the county of Wexford; at Doncaster, in the West Riding of the county of York; at Stewarton, in the county of Ayr; at Ballyroan, in Queen's County; and at Monasterevan, in the county of Kildare.

Births, Marriages, and Deaths.

BIRTHS.

ATKINSON.—On Nov. 14th, the wife of G. L. Atkinson, M.R.C.S., L.R.C.P. Lond., of a daughter.

DEANESLY.—On Nov. 18th, the wife of Edward Deanesly, M.D. Lond., of a daughter.

MACLEAN.—On Nov. 15th, the wife of Kenneth Maclean, F.R.C.S. Edin., of a daughter.

MARSHALL.—At Rawalpindi, Punjab, India, on the 16th inst., the wife of Major D. G. Marshall, I.M.S., 17th Bengal Lancers, of a son.

OSBORN.—On Nov. 5th, the wife of F. A. Osborn, M.R.C.S., L.R.C.P. Lond., of a son.

MARRIAGE.

HYDE—ROLLESTON.—On Nov. 12th, at St. Mary-le-Strand, Patrick George Hyde, M.B., to Minnie Carson Rolleston, only daughter of the late Archibald Rolleston of Drogheda.

DEATHS.

MANLEY.—On Nov. 16th, at Lansdown-terrace, Cheltenham, Surgeon-General William George Nicholas Manley, C.B., V.C., M.R.C.S. Eng., Army Medical Staff (retired), son of the late Rev. William Nicholas Manley, in his 70th year.

STURGES.—On Nov. 16th, at Garth, Baird's-hill, Broadstairs, Montague James Sturges, M.D. Edin., aged 66.

SUTHERLAND.—On Nov. 19th, at 21, New Cavendish-street, Portland-place, W., Henry Sutherland, M.A., M.D. Oxon., M.R.C.P., second son of the late A. J. Sutherland, M.D., F.R.C.P., F.R.S., aged 59.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

DOUBTFUL COMPLIMENTS.

"DR. H. S. LUNN, Mr. W. H. Lunn, and Mr. Connop F. Perowne present their compliments to

Dr. .....

and invite him to stay for one week at the Hotel Eiger, Grindelwald, during the skating season,

or

the Hotel Marini, the Hotel Roma, or the Hotel Russie, Rome, on one of the dates mentioned overleaf, and on the conditions there stated."

The above is a faithful rendering of a document which we have received, in company, we gather from "the conditions stated over-leaf," with a few other selected medical men. At first we thought it a very generous offer on the part of Messrs. Lunn, Lunn, and Perowne, but on turning to the conditions over-leaf we changed our opinion. The three gentlemen, to do them justice, make no secret of why they make this offer. "This invitation," they say, "is given with the object of making known to the medical profession the economical advantages of the system of travelling in groups on the outward journey with the right of independent return, the excellence of our hotels and our general arrangements, and also the charms of the High Alps in the winter season, and the climatic advantages and other attractions of Rome during the winter. The invitation is given on the understanding that those who accept it will take tickets from our offices and travel with our parties on the dates mentioned below, such tickets being charged for only at the rate at which *ordinary* return tickets can be purchased." The prices, we learn, are for Rome, first-class return, £16 1*s.* 8*d.*; for Grindelwald, first-class return, £10 1*s.* 3*d.* No charge is made for hotel accommodation in either Rome or Grindelwald during the week. The invitation is strictly personal and those not favoured with it must pay ordinary rates—namely, Rome £17 17*s.*, or Grindelwald, £12 12*s.* Thus it will be seen that the offer is not much measured in sordid dross. It is only £1 15*s.* 4*d.* in the one case and £2 10*s.* 9*d.* in the other. We do not think it right for a tourist agency to conduct its business in this manner.

CHEAP PISTOLS.

To the Editors of THE LANCET.

SIRS,—Your articles on the "cheap pistol" craze tempt me to chronicle a case that came under my notice. Some few months ago, whilst acting as locum, a boy was brought to me suffering from a bullet wound inflicted accidentally, though through gross carelessness, by a friend of his. The pistol was of the "toy" variety, although it took a conical bullet. The wound was in the abdomen, about three inches above the pubes and almost in the middle line. I probed the wound and found that the track made by the projectile was in the layers of the anterior abdominal wall. The bullet I could not localise, so I carefully washed and dressed the wound. No bad symptoms occurred and the wound healed rapidly.

I am, Sirs, yours faithfully,

EDGAR WHALLEY, M.R.C.S. Eng., L.R.C.P. Lond.

Lancaster, Nov. 17th, 1901.

THE VALUE OF A BOOK.

To the Editors of THE LANCET.

SIRS,—Can any of your readers tell me the value of a book entitled "Elementa Physiologiæ Corporis Humani," Auctore Alberto v. Haller. Four volumes. Published in 1762 at Lausanne by Franciscus Grasset.

I am, Sirs, yours faithfully,

Nov. 14th, 1901. S. E. L.

A CASE OF MALINGERING.

To the Editors of THE LANCET.

SIRS,—Mr. Donaldson-Sim's letter published in THE LANCET of Nov. 9th, p. 1314, recalls to my mind a malingerer whom I had to deal with as far back as in 1896. During that year I was temporarily at the Poplar Hospital. A man walked into the receiving-room and said that whilst working on the Great Eastern line he had been hit in the abdomen by a telegraph pole. He had vomited, he said, and the abdomen was hard and distended and very painful (apparently). There was an old laparotomy scar; the operation, he stated, had been done in Montreal. He was admitted to be watched, as his pulse and general condition did not indicate any serious abdominal injury. He did not vomit again and was discharged for insolence the next day. Early in 1897 I was house surgeon at the London Hospital. The same man was admitted into the wards under my care with the same history and identical condition of abdomen as observed at Poplar. The scene of the accident was transferred to the Underground at St. Mary's station. Unfortunately for him I recognised him. He worked his temperature

up to 105°, and became so abusive and noisy when the sister of the ward attempted to hold the thermometer under his arm that I had to have him removed to the padded room. There with some considerable trouble I took his temperature in the rectum and found it normal. He discharged himself next morning. At both hospitals he gave the name of James Dutton. I found that he had been in London Hospital 18 months previously and was marked on the register as discharged "by himself." He had not then a laparotomy wound, so he had induced some confiding surgeon to open his abdomen soon after his first stay with us. No doubt this man has been imposing on public charities for at least seven years. I would suggest that the authorities of the next hospital he victimises should hand him over to the police either for "obtaining food and lodging by false pretences" or as "a rogue and a vagabond."

I am, Sirs, yours faithfully,

Stoke Newington, Nov. 12th, 1901. PHILIP WILLIAMS.

MR. YORKE-DAVIES.

To the Editors of THE LANCET.

SIRS,—Your remarks in THE LANCET of Nov. 16th, p. 1387, oblige me again to write. I inclose you my secretary's shorthand notes of my dictated letter, and you will see that it is written to Mr. T. P. O'Connor and not to the Editor of *M.A.P.* With regard to advertising, may I point out that in these days THE LANCET may be found in all clubs and in many of the hotels; indeed, not only THE LANCET but other medical papers, and that these papers are read by 10, or probably 50, times the number of lay readers to medical men. Surgeons and medical men give their experience (and that very rightly) in these papers as I did to Mr. O'Connor, and therefore are really advertising themselves "*in excelsis*," in my opinion quite legitimately. It has always struck me as an anomaly that though all lay papers are allowed to advertise barristers, military men, artists, and, indeed, every other profession as a matter of course, they must not do so in the case of members of the medical profession. I do not make these observations in the unkindly spirit that you have displayed towards me in the recent comments you have made. Trusting you will find room for this letter, I hope my last,

I am, Sirs, yours faithfully,

Harley-street, W., Nov. 18th, 1901. N. E. YORKE-DAVIES.

*** The shorthand notes are addressed to Mr. O'Connor. And t seems that Mr. Yorke-Davies still maintains that Mr. O'Connor was guilty of a breach of confidence when he published in his paper, *M.A.P.*, a letter intended for his private eye only. We also gather that Mr. Yorke-Davies has no objection to securing publicity, though he resents any suggestion that he has tried to obtain it. Mr. Yorke-Davies does not say how his letter upon his system of treatment for obesity came to appear in *Modern Society*, but we can quite understand that an explanation is not easy. We disclaim any animus against Mr. Yorke-Davies, while admitting the greatest distaste for his ethical views.—ED. L.

A NOVEL SCISSORS SHARPENER.

A SIMPLE contrivance for keeping scissors sharpened is a rounded piece of glass, about three inches long, upon which the scissors are drawn a few times backward and forward, as in the act of cutting. Messrs. Ellen and Co., of 118, Fenchurch-street, London, E.C., supply it for 4*d.*, post free.

"LOOKING BACK."

A CORRESPONDENT signing himself "Vacca," who confesses his ignorance, asks us to tell him who was Blackmore, the poet from whom the quotation was taken which appeared in THE LANCET of Nov. 16th, 1823, and which we reprinted last week. Richard Blackmore, M.D., was born at Corsham in 1650. He was educated at Westminster School and took his degree at Padua. He was knighted by William III. and produced a vast quantity of writings. One poem—namely, "Creation"—must have been good for it was praised by two such competent critics as Addison and Johnson. Besides his poems and a new version of the Psalms he wrote sundry medical works.

B. J. H.—The information supplied is not sufficient to enable us to give a definite answer to the question. The section of the Lunacy Act put in action is not stated. If the patient was dealt with under Section 13 of the Lunacy Act, 1890 (and this appears probable by two medical certificates being required), the justice should have made an order upon the guardians for the payment of a "reasonable remuneration," in accordance with Section 286 of the same Act. The fee is payable whether the alleged lunatic is a pauper or not. If the patient was removed under Section 20 our correspondent would be entitled to the justice's order for a fee, but if under Section 4 he would not. Much trouble would be saved if medical men certifying for alleged lunatics would furnish themselves with blank orders for payment of fees and would lay one of them before the justice at the time of submitting the certificate of insanity. The forms are supplied by Messrs. Knight, La Belle Sauvage, E.C.

L.R.C.S. & P.—We think that all druggists should make a habit of returning prescriptions. In our correspondent's case he does not seem to have inquired for his prescription until two and a half years after he had given it to the druggist, so that he must not be surprised that it was not forthcoming.

Podagra.—We do not give medical advice. The question is one that should be put to the family medical man.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

B. J. P.—Diseases of the Lungs and Pleura, including Consumption, by Sir Richard Douglas Powell.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 21st, 1901.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Nov. 15	29·58	W.	...	56	42	30	30	31	Foggy
,, 16	29·94	N.	...	48	40	31	31	32	Foggy
,, 17	30·32	W.	...	59	42	26	Frn.	28	Fine
,, 18	30·33	W.	...	56	52	28	38	39	Cloudy
,, 19	30·12	W.	...	58	54	39	50	52	Overcast
,, 20	29·95	N.W.	...	62	56	51	50	53	Cloudy
,, 21	29·84	S.W.	...	57	54	49	48	51	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.) St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

WEDNESDAY (27th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

THURSDAY (28th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

FRIDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.). West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

SATURDAY (30th).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (25th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Discussion on the Symptoms and Treatment of Floating Kidney (opened by Mr H. Morris.) (Council Meeting Night.)

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council. 8 P.M. Communications:—Mr. E. W. Roughton: A Case of Alveolar Abscess followed by Necrosis.

Cellulitis, and Fatal Hæmorrhage.—Mr. A. S. Underwood: Unexpected Outcome of a Regulation Case. Paper:—Mr. W. C. Grayston: Science in Dentistry and a few Experiments in Gold Filling.

TUESDAY (26th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Papers:—Mr. T. Bryant: Case of Intestinal Obstruction due to the Pressure of a Vesical Sacculus upon a Coil of Small Intestine.—Dr. A. E. Garrod:—About Alkaptonuria.

WEDNESDAY (27th).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—5 P.M. Meeting.

HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8.30 P.M. Pathological Evening.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (25th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. M. Morris: Clinique. (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Paget: Cancer of the Breast.

NATIONAL INDIAN ASSOCIATION (Jehanghir Hall, Imperial Institute-road, S.W.).—4.30 P.M. Dr. M. L. Dhingra: Indian Sanitation, a Personal View.

TUESDAY (26th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. W. Ewart: Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Abraham: Skin Cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. J. Taylor: Hemiplegia.

WEDNESDAY (27th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. P. W. de Santi: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Saunders: Therapeutics.

LONDON THROAT HOSPITAL (204, Great Portland-street, W.).—5 P.M. Dr. Kelson. (Post-Graduate Course.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. P. Kidd: Laryngeal Tuberculosis.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—8 P.M. Dr. Holloway: Diseased Conditions of the Fauces and Pharynx.

THURSDAY (28th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Beddard: Some Points in the Treatment of Bright's Disease.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Steward: The Surgical Treatment of Infantile Paralysis.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Mott: Medical Cases. (Post-Graduate Course.)

LONDON TEMPERANCE HOSPITAL (Hampstead-road, N.W.).—2 P.M. Dr. S. Fenwick: Clinical Demonstration.

FRIDAY (29th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. E. Clarke: Clinique. (Eye.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. S. Taylor: Medical Anatomy.

LONDON TEMPERANCE HOSPITAL (Hampstead-road, N.W.).—2 P.M. Dr. P. Parkinson: Clinical Demonstration.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

During the week marked copies of the following newspapers have been received:—*Building News, Dorset County Chronicle, Bath Chronicle, Leicester Daily Post, Infant's Magazine, Leicester Daily Mercury, Bath Herald Weekly, Surrey and Hants News, Leek Times, Cannock Express, Rutland Echo, Oban Express, Daily Telegraph, Sussex Coast Mercury, Worksop Guardian, Sunderland Herald and Daily Post, Glasgow Herald, Batley News, Nuneaton Advertiser, The Tribune (Warwickshire), Jedburgh Post, East Anglian Times, Jewish World, Echo, Teviotdale Record, Brewing Trade Review, Chronicle, Leeds Mercury, Brick and Pottery Trades Journal, Carriage Builders' Journal, &c.*

Communications, Letters, &c., have been received from—

A.—Dr. P. H. Abercrombie, Lond.; Monsieur J. Astier, Asnières; Messrs. Arnold and Sons, Lond.; Apollinaris Co., Lond.; Anglo-American and Continental Pharmaceutical Co., Lond.; Arrowsmith Co., Newark, U.S.A.

B.—Mr. C. Birchall, Liverpool; Messrs. Bedford and Co., Lond.; Messrs. Brand and Co., Lond.; Bradford Children's Hospital, Secretary of; *Brighton Gazette*; Mr. A. Baxendell, Churt; Miss Christiana S. Bremner, Florence; Mr. Buckston Browne, Lond.; Dr. J. Braithwaite, Leeds; Dr. J. Percival Brown, Manchester; Mr. H. L. Barnard, Lond.; Dr. F. J. Barker, Lond.; Dr. E. F. Buzzard, Lond.; Mr. C. J. Bond, Leicester; British Fuel Economiser, &c., Co., Lond., Secretary of; Dr. W. Bruce, Dingwall; Dr. W. F. V. Bonney, Lond.; Mr. C. L. Bedford, Birmingham; Dr. F. A. Broockhaus, Lond.; Dr. J. T. Brown, Tarkaston.

C.—Dr. L. M. Chesney, Lond.; Messrs. Callard and Co., Lond.; Messrs. Carnrick and Co., Lond.; Messrs. E. Cook and Co., Lond.; C. A. J.; Mr. J. B. Cameron, Lond.; Chester General Infirmary, Secretary of; Messrs. J. A. Carveth and Co., Toronto, Canada; Calf, Kintbury; Dr. Thompson Campbell, Glasgow; Mr. J. H. Chaldecott, Lond.; Clayton Fire Extinguishing, &c., Co., Lond., Secretary of.

D.—Messrs. J. Defries and Sons, Lond.; Mr. T. Dixon, Lond.; Messrs. Davis and Ornstien, Lond.; Mr. E. Darke, Lond.; Messrs. H. Dawson and Co., Lond.; Messrs. A. De St. Dalmas and Co., Leicester.

E.—Mr. W. Escombe, Grimsby; Miss Evans, Bolton; Electrical Ozone and Light Treatment, Lond., Secretary of; Electric Lamp Regenerating Co., Lond., Secretary of; Examination Hall, Lond., Secretary of.

F.—Mr. A. Fawcett, Birmingham; Dr. T. C. Fisher, Blagdon; Messrs. Fletcher, Fletcher, and Co., Lond.; F. P.

G.—Dr. W. A. Galton, Lond.; Mrs. Gann, Hayling Island; Glasgow Southern Medical Society, Editorial Secretary of.

H.—Mr. F. R. Humphreys, Lond.; Mr. C. H. Huish, Lond.; Hovis Bread Flour Co., Macclesfield; Mr. H. J. Hall, Manchester; Mrs. H., Hertford; Dr. T. H. Hunt, Halifax; Hastings, Town Clerk of.

I.—Mr. E. C. B. Ibotson, Lond.; Irish Medical Schools and Graduates' Association, Dean of.

J.—Dr. Robert Jones, Woodford Bridge; J. G.; J. J.; J. H.; J. R. A.

K.—Mr. R. B. B. Kerin, Lond.; Messrs. R. A. Knight and Co., Lond.

L.—Dr. W. J. Le Grand, South Normanton; Dr. T. G. Lyon, Lond.; Dr. C. H. Leaf, Lond.; Messrs. C. and E. Layton, Lond.; *La Parole*, Paris, Editor of; Dr. A. Leitch, Gourock; Miss Leech, Lond., Mr. C. Lindsay, Slaidburn; Leith Hospital, Secretary of.

M.—Dr. D J. Macaulay, Halifax; Messrs. Mather and Crowther, Lond.; M. J.; Melbourne House, Leicester, Principal of; Dr. M.; Dr. C. F. Moore, Dublin; Dr. B. E. Myers, Lond.; Male and Female Nurses' Association, Lond., Lady Superintendent of, Mr. E. C. Masser, Moseley; Manchester Hospital for Consumption, Secretary of.

N.—Messrs. Nicolay and Co., Lond.; North London Hospital for Consumption, Secretary of; North Staffs Infirmary, Hartshill, Secretary of; Nurses' Institute, Canterbury, Lady Superintendent of; Nottingham General Hospital, Secretary of; Mr. H. Needles, Lond.; Mr. J. C. Needes, Lond.

O.—Messrs. Orridge and Co., Lond.

P.—Dr. J. B. Pike, Loughborough; St. Pancras Borough, Medical Officer of Health of; P. V.; Mr. Y. J. Pentland, Edinburgh; Mr. T. Pabst, Bath; Perth District Asylum, Superintendent of; Mr. J. C. Platt, Lond.; Mr. E. A. Piggot, Clare, Suffolk; Mr. Victor G. Plarr, Lond.; Mr. J. Padman, Lond.; Dr. C. T. Parsons, Lond.; Messrs. Peacock and Hadley, Lond.

R.—Dr. Guthrie Rankin, Lond.; Dr. Nathan Raw, Liverpool; Royal College of Surgeons in Ireland, Registrar of; Royal Aquarium, Managing Director of; Messrs. Ridges and Sons, Wolverhampton; Mr. W. Randall, Bridgend; Royal Hants County Hospital, Winchester, Secretary of; Dr. J. Riviere, Paris; Messrs. Reynolds and Branson, Leeds; Royal Hospital for Incurables, Dublin, Secretary of.

S.—Mr. J. L. Stretton, Kidderminster; Mr. J. Startin, Lond.; Messrs. W. B. Saunders and Co., Lond.; Sussex County Hospital, Brighton, Secretary of; Messrs. Street and Co., Lond.; Society for the Study of Disease in Children, Hon. Secretary of; Messrs. G. Street and Co., Lond.; Society of Anæsthetists, Secretary of; Scholastic, Clerical, &c., Association, Lond.; Surgeon R. W. Stanistreet, R.N., Portsmouth.

T.—Toddington Orchard Co., Winchcombe; T. S. P.

U.—Mr. F. Upsher-Smith, Watford.

V.—Vinolia Co., Lond.; Messrs. G. Van Abbott and Sons, Lond.; Dr. Vincent, Lond.

W.—Dr. A. A. Warden, Paris; Dr. A. McCook Weir, Liverpool; Messrs. Willows, Francis, Butler, and Thompson, Lond.; Wills, Ltd., Lond.; Dr. Hugh Woods, Lond.; Mr. A. W. Wigmore, Lond.; W. M. O. C.; Messrs. Willing, Lond.; W. J. R.

Y.—Mr. T. E. Young, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. J. P. Aitchison, Blackburn; A. G. E.; A. L. S.; Alpha, Bristol; A. D. J.; A. W. T.

B.—Dr. W. B. Bell, Aigburth; Dr. C. S. Blythman, Swinton; Bradfield Union, Clerk of; Mr. H. Brook, Weston-super-Mare; Mr. D. Biddle, Kingston-on-Thames; Bristol General Hospital, Secretary of; Messrs. D. Browne and Son, Tyrone; Birkenhead and Wirral Children's Hospital, Hon. Treasurer of; Birmingham and Midland Skin, &c., Hospital, Hon. Treasurer of; Mr. C. Bryant, Lond.; Sir William M. Banks, Liverpool; Dr. T. A. Bowes, Herne Bay; Mr. H. Burt, Brighton; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. G. D. Bateman, Cork; B. O. R.

C.—Dr. E. P. Cathcart, Glasgow; City Advertising Agency, Lond.; Mr. G. W. K. Crosland, Huddersfield; C. A. R.; C. S. B.

D.—Mr. W. F. Dale, Sheffield; Mr. J. T. Davenport, Lond.; Mr. A. Driver, Chelmsford; Dr. P. J. Daly, Cork; Dr. D.

E.—Miss Etheridge, Lond.; E. S.; Emperor Frederick Spring, Offenbach, Germany; E. D.; Dr. W. A. Evelyn, York.

F.—Mr. J. M. Forbes, Greenock; Miss Lena Fox, Wimbledon; Francis, Stevenage; F. E. H.; Mr. E. J. Foulston, Liverpool.

G.—Dr. S. A. Gill, Formby; Messrs. Guyot-Guenin and Son, Lond.; Messrs. C. Griffin and Co., Lond.; Dr. H. W. Gardner, Shrewsbury; G. A. H.

H.—Mr. J. H. Harris, Blisworth; Mr. D. Heron, Ballynahinch; Messrs. C. J. Hewlett and Son, Lond.; Mr. G. F. Henry, Lond.; Mr. E. Huxley, Lond.; Hull Royal Infirmary, Secretary of; Mr. D. S. Henderson, Dunoon; Mr. J. Heywood, Manchester; Mr. J. H. Harris, Gayton; Mr. T. Homer, Cradley; Dr. D. V. Haig, Thirsk.

I.—International Plasmon, Lond.

J.—Dr. C. H. L. Johnston, St. John, New Brunswick; J. L. C.; J. I.; J. W.; J. T. C. C.; J. S. H.; J. C. B.; J. S. L.; Mr. E. O. Jones, Bethesda.

K.—Dr. R. Kirk, Partick; Dr. E. E. Klein, Lond.

L.—Dr. A. W. W. Lea, Manchester; London College of Pharmacy for Ladies, Principal of; Locum Tenens, Leicester; Mrs. Lappin, Gilford, Ireland; Dr. L.; Mr. H. K. Lewis, Lond.; Liverpool Hospital for Women, Treasurer of.

M.—Mr. H. Martindale, Lond.; Mr. T. H. Morse, Norwich; Mr. T. Messenger, Kirkbridge, Carlisle; Manchester Clinical Hospital, Secretary of; Mr. A. D. MacLeod, Allahabad, India; Mr. P. J. Murphy, Aberdare; Mr. G. W. Moseley, Builth; Messrs. Meldrum Bros., Lond.; Mr. D. Macdougall, Greenock; C. Midgley, Ltd., Manchester; Mr. S. H. Merryweather, Congleby; Manchester Royal Eye Hospital, Secretary of; Dr. G. de Maurans, Paris; Dr. J. F. D. Macara, Durness; Dr. A. Marriott, Aldeburgh.

N.—National Provident Institution, Lond.

O.—Mr. F. A. Osborn, Dover; Oldham Infirmary, Secretary of; Ovo, Ltd., Lond.

P.—Mr. J. A. Procter, Lydd; Dr. F. W. Pavy, Lond.

Q.—Mr. H. C. Quin, Mountain Ash.

R.—Dr. W. G. Richardson, Newcastle-on-Tyne; Royal Victoria Hospital, Belfast, Secretary of; Mr. R. Rowlands, Criccieth; Royal United Hospital, Bath, Secretary of; R. G.; R. P. R.; R. I.; Royal Victoria Hospital, Bournemouth, Secretary of; Dr. W. Ross, West Hartlepool; Mr. A. C. Roper, Exeter; Mr. J. S. P. Rodrigues, Pontypridd; R. S.

S.—Miss E. Spencer, Plymouth; Smedley's Hydro, Matlock; Dr. S.; Somerset and Bath Lunatic Asylum, Cotford, Clerk of; Dr. E. W. Saunders, Newbury; Major F. Smith, R.A.M.C., Sierra Leone; Mr. T. J. Scott, Lond.; S. D. S.; S. R. M.; Mr. J. Sellers, Lond.; S. H. M.; Messrs. Spiers and Pond, Lond.; Messrs. T. and H. Smith and Co., Edinburgh; Surgeons' Hall, Edinburgh, Treasurer of; Mr. D. Samuel, Aberavon; Mr. F. J. Steward, Lond.

T.—Mr. W. H. Thomas, Bath; Dr. J. H. Tonking, Camborne; Dr. J. Taylor, Lond.; Dr. Tate, Rothwell; T. A. L.

U.—Miss A. C. Underwood, Torquay.

W.—Dr. W. A. H. Waite, Leeds; Mr. R. M. Wright, Burwell; W. M. A. A.; W. J. S., Londonderry; Mr. J. Worrall, Southport; Mr. H. J. Walker, Lond.; Messrs. H. Wilson and Son, Lond.; West Bromwich District Hospital, Secretary of; W. V. R.; Dr. James Wilson, Liverpool; Weir Hall, Edmonton, Proprietor of; Mr. H. F. Wigg, Lond.; Messrs. Wyleys, Coventry.

Y.—Yorkshire College, Leeds, Secretary of.

Z.—Z., Manchester.

EVERY FRIDAY.

THE LANCET.

PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.